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MEDICAL BOTANY:

CONTAINING

SYSTEMATIC AND GENERAL DESCRIPTIONS,

WITH

Plates of all the Medicinal Plants,

COMPREHENDED IN THE

CATALOGUES OF THE MATERIA MEDICA,

AS PUBLISHED BY THE

ROYAL COLLEGES OF PHYSICIANS OF LONDON, EDINBURGH, AND DUBLIN;

TOGETHER WITH THE PRINCIPAL MEDICINAL PLANTS NOT INCLUDED IN THOSE PHARMACOPŒIAS.

ACCOMPANIED WITH A CIRCUMSTANTIAL DETAIL OF THE MEDICINAL EFFECTS, AND OF THE DISEASES IN WHICH THEY HAVE BEEN MOST SUCCESSFULLY EMPLOYED.

BY

WILLIAM WOODVILLE, M.D. F.L.S.

THIRD EDITION,

IN WHICH THIRTY-NINE NEW PLANTS HAVE BEEN INTRODUCED.

THE BOTANICAL DESCRIPTIONS ARRANGED AND CORRECTED BY

DR. WILLIAM JACKSON HOOKER, F.R.S. L.S. &c.

Who has added an Index following the Arrangement of Jussieu.

THE NEW MEDICO-BOTANICAL PORTION SUPPLIED BY

G. SPRATT, ESQ. AUTHOR OF THE FLORA MEDICA,

Under whose immediate Inspection the whole of the Plates have been coloured.

IN FIVE VOLUMES.

VOL. I.

LONDON:

PUBLISHED BY JOHN BOHN, 17, HENRIETTA STREET.

1832.

Dedication to the first edition.

To Sir George Baker, Bart.

PRESIDENT,

THE

FELLOWS,

AND THE

LICENTIATES,

OF THE

ROYAL COLLEGE OF PHYSICIANS,

LONDON:

THIS FIRST VOLUME OF MEDICAL BOTANY,

WITH THEIR PERMISSION,

IS MOST RESPECTFULLY INSCRIBED,

BY

THE AUTHOR.

TO

WILLIAM LAWRENCE, ESQ. F.R.S.

LATE PROFESSOR OF ANATOMY AND SURGERY TO THE COLLEGE,
SURGEON TO ST. BARTHOLOMEW'S, BRIDEWELL, AND BETHLEM HOSPITALS,
ETC. ETC.

THIS NEW EDITION OF

Woodville's Medical Botany,

IS RESPECTFULLY INSCRIBED,

AS A TESTIMONIAL OF GRATITUDE AND RESPECT,

BY

THE PUBLISHER.

ADVERTISEMENT TO THE PRESENT EDITION.

In presenting the Medical Botany of the late Dr. Woodville in its improved form, the publisher cannot omit the opportunity of returning his thanks to Dr. Jackson Hooker and Mr. Spratt, for the pains bestowed upon the Supplemental Volume. To the latter gentleman, in particular, he feels the work is greatly indebted, from his kindly undertaking to have THE WHOLE OF THE PLATES COLOURED UNDER HIS IMMEDIATE INSPECTION, FROM ORIGINAL SPECIMENS. This had become necessary from the very slovenly manner in which the greater portion of the former edition had been done, some of the plates exhibiting colours very different to those described in the text.

The work will now be found to contain FIGURES AND DESCRIPTIONS OF ALL THE PLANTS USED IN ENGLISH MEDICINE, and it is hoped, that the present *limited impression of two hundred copies* will deserve the praise bestowed upon the edition of 1790:* "We feel a pleasure in saying that this book is finished with care, and in a neat and elegant manner. Among the plates, from the masterly hand of Mr. Sowerby, some represent plants of which no engraving had before been given; others of which engravings were only to be found in large and expensive works. The whole are, with very few exceptions, taken from fresh plants, or dried specimens. In giving an account of the medicinal properties of the several articles, the author has followed the most recent and approved writers, and he has particularly availed himself of the works of the latest and most intelligent travellers, in correcting numerous vague and erroneous opinions relative to the mode of procuring and preparing many curious foreign drugs." Similar testimonies of its merit may be found in every contemporary journal; but having been nearly half a century established in public favour, it would seem impertinent to quote more respecting a work which is "*of such authority with professional men, as to be almost as essential to them as the Pharmacopœia itself.*"

A few copies of the additional volume have been taken off separately, to accommodate the subscribers to the former editions, printed by the late Mr. William Phillips, from whose executors the copyright has passed into the hands of the present publisher.

17, *Henrietta Street*, *June* 1, 1832.

* *British Critic*, vol. VII, p. 55.

PREFACE TO THE FIRST EDITION.

IN the catalogues of the Materia Medica, the productions of the animal and mineral kingdoms bear a small proportion to those of the vegetable. Though it must be acknowledged that for some time past the medicinal uses of vegetable simples have been less regarded by physicians than they were formerly, which probably may be ascribed to the successive discoveries and improvements in chemistry; it would however be difficult to shew that this preference is supported by any conclusive reasoning drawn from a comparative superiority of Chemicals over Galenicals, or that the more general use of the former has actually led to a more successful practice.

Although what may be called the herbaceous part of the Materia Medica, as now received in the British pharmacopœias, comprises but a very inconsiderable portion of the vegetable world; yet limited as it now is, few medicinal practitioners have a distinct botanical knowledge of the individual plants of which it is composed, though generally well acquainted with their effects and pharmaceutical uses. But the practitioner, who is unable to distinguish those plants which he prescribes, is not only subjected to the impositions of the ignorant and fraudulent, but must feel a dissatisfaction which the inquisitive and philosophic mind will be anxious to remove, and to such it is presumed MEDICAL BOTANY, by collecting and supplying the information necessary on this subject, will be found an acceptable and useful work; the pro-

fessed design of which is not only to enable the reader to distinguish with precision all those plants which are directed for medicinal use by the Colleges of London and Edinburgh, but to furnish him at the same time with a circumstantial detail of their respective virtues, and of the diseases in which they have been most successfully employed by different writers.

A distinctive and characteristic knowledge of natural objects should certainly precede the consideration of their different properties and qualities; and with respect to plants, this knowledge is seldom to be adequately attained by a mere verbal description: accurate delineations therefore become necessary, and this department is committed to Mr. Sowerby, an artist of established reputation, whose talents are not less conspicuous in the correctness than in the beauty of his designs.

It is justly a matter of surprize, that notwithstanding the universal adoption of the Linnæan system of Botany, and the great advances made in natural science, the works of Blackwell and Sheldrake should still be the only books in this country in which copper-plate figures of the medicinal plants are professedly given; while splendid foreign publications of them, by Regnault, Zorn, and Plenk, have appeared in the space of a very few years. These works however are far from superceding that now offered to the public; for without resorting to the inviduous task of pointing out their errors and imperfections, the author has the satisfaction of having exhibited Icons of several rare and valuable plants, which have never been completely figured in any preceding work whatever: and by subjoining some account of the botanical and medical history of each species, curiosity is more fully gratified, and a double interest is excited in the mind of the student.

Duplex est dos libelli.

PREFACE TO THE FIRST EDITION.

Respecting the uses of Simples, the opinion of Oribasius will not be disputed, viz. " *Simplicium medicamentorum, & facultatum* " *quæ in eis insunt, cognitio ita necessaria est, ut sine ea nemo rite* " *medicari queat:*" and it is a lamentable truth, that our experimental knowledge of many of the herbaceous simples is extremely defective; for as writers on the Materia Medica have usually done little more than copy the accounts given by their predecessors, the virtues now ascribed to several plants are wholly referrible to the authority of Dioscorides. It is however hoped that the medical reader will find what relates to this part of the work as complete as the slow progressive state of experience in physic will admit: with this intention, facts and opinions have been industriously collected from various authorities; and those adduced by Professor Murray, and the works of the late Dr. Cullen, have furnished the largest contribution.

The publication of this work in monthly numbers has afforded the author an opportunity of knowing already the sentiments entertained of it, by several Gentlemen of great medical and botanical authority; from whose unsolicited communications he has derived considerable assistance, and for whose friendly suggestions he desires to make his most grateful acknowledgments.

Pinus sylvestris

Published by Phillips & Fardon, June 1st 1805.

ORD. I. CONIFERÆ.

From *conus* and *fero*, consisting of cone-bearing plants, all of which produce male and female flowers separately. The whole order is almost entirely composed of shrubs or trees abounding with a resinous juice, of a pleasant odour, but bitter, and disagreeable to the taste.

Coniferæ sunt resiniferæ et diureticæ. *Lin.*

PINUS SYLVESTRIS. SCOTCH FIR.

Pix liquida. *Pharm. Lond. & Edinb.*

SYNONYMA. Pinus sylvestris. *Bauh. Pin. p.* 491. *Gerard. Emac. p.* 1356. *Raii Hist. p.* 1399. Pinus rubra foliis geminis brevioribus glaucis, conis parvis mucronatis. *Mill. Dict.* Pinus sylvestris foliis brevibus glaucis, conis parvis albicantibus. *Du Hamel. Arb.* 2. *p.* 125. *t.* 30. *Raii Synop. p.* 442. See *Huds. Flor. Ang. ed.* 1. 361. *Lightfoot, Flor. Scot. p.* 587. *Wither. Bot. Arr. p.* 1092. *Ic. Miller's Illust. The Scotch Fir Tree, Hunter's Evel.*

Class Monoecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1077.

Ess. Gen. Ch. *Masc. Cal.* 4-phyllus. *Cor.* 0. *Stam.* plurima. *Antheræ* nudæ.

Fem. Cal. strobili: squama 2-flora. *Cor.* 0. *Pist.* 1. *Nux* ala membranacea excepta.

Sp. Ch. P. foliis geminis rigidis, conis ovato-conicis longitudine foliorum subgeminis, basi rotundatis. *Hort. Kew.*

THIS tree grows usually straight, tapering, and to a great height, so as to be made into good masts for ships: the branches are numerous, divaricating, and like the stem covered with rough bark of a reddish brown colour: the leaves stand in pairs, and are united at the base with the sheath; they are two or three inches long, convex on one side, concave on the other, very narrow, linear, striated, somewhat pointed, of a deep green glaucous colour, and surround the ends of the smaller branches: the flowers are male and female upon the same tree; the former stand in bunches without any calyx, unless the loose scales be considered as such: there is no corolla: the filaments are numerous, united at the bottom, forming an upright pillar, and furnished with erect antheræ: the latter consists of a calyx, or common cone, which is small, composed of scales, with two flowers in each; the cones are oblong, imbricated, permanent, inflexible: there is no corolla: the germen is very small, producing a tapering style, terminated by a simple stigma: there is no capsule, but the scales of the cone, which before stood open, close upon the seed or nut, which is supplied with a membranous wing.

It is a native of Scotland, especially among the highland mountains, and hence named Scotch Fir. It flourishes best in a poor sandy soil. In black, boggy or chalky ground, or near stagnant waters, it does not thrive. The wood is used for various purposes, and the inner bark is, by the inhabitants of the north of Europe, made into a kind of bread.

Though most species of Fir possess in common the same medicinal

properties, and all agree in affording the different products of the turpentine kind, yet as it has been found that some species produce these different articles of the Materia Medica in greater purity, or in more abundance than others, we have accordingly assigned to each, the respective article which it best supplies. This tree not only furnishes most abundantly the Pix liquida, or Tar, but also from it may be obtained the common turpentine, and the white and yellow resins.

The manner in which the Tar is procured is by cutting the tree into pieces, which are inclosed in a large oven constructed for the purpose, with a channel at the bottom. A sufficient degree of heat is then applied, by which the tar is forced out of the wood, and runs off by the opening at the bottom: a process termed *distillatio per descensum*.

Tar, which is well known from its œconomical uses, is properly an empyreumatic oil of turpentine, and has been much used as a medicine both internally and externally. Tar water,* or water impregnated with the more soluble parts of tar, was sometime ago a very popular remedy in various obstinate disorders, both acute and chronic; especially in small-pox, scurvy, ulcers, fistulas, rheumatism, asthma, coughs, cutaneous complaints, &c. and though its medicinal efficacy was greatly exaggerated by the publications of Bishop Berkeley, Prior, and others, yet Dr. Cullen acknowledges that he experienced this preparation in several cases to be a valuable medicine, and that it "appeared to strengthen the tone of the stomach, to excite appetite, promote digestion, and to cure all symptoms of dyspepsia. At the same time it manifestly promotes the excretions, particularly that of urine: and the same may be

* The proportions that have been commonly employed, are two pounds of tar to a gallon of water; which are to be well stirred together, then suffered to settle for two days, and the clear liquor poured off for use. From a pint to a quart, according to circumstances, may be taken in the course of twenty-four hours. Dr. Cullen thinks with Mr. Reid, that the acid principle gives the virtue to tar water; and hence the Bishop of Cloyne properly preferred the Norway tar to that of New England, as the former contains more acid than the latter.

presumed to happen in that of others. From all these operations it will be obvious, that in many disorders of the system this medicine may be highly useful."[a]

An ointment of tar is directed in both Pharmacopœias, which has been chiefly employed in cutaneous disorders. Dr. Cullen says, "I have met with an empirical practice with respect to tar of a singular kind. A leg of mutton is laid to roast; and whilst it continues roasting, it is basted with tar instead of butter. Whilst the roasting goes on, a sharp skewer is frequently thrust into the substance of the mutton, to give occasion to the running out of the gravy; and with the mixture of the tar and gravy to be found in the dripping-pan, the body is to be anointed all over for three or four nights successively; whilst for the same time the same body-linen is to be worn. This is alleged to be a remedy in several cases of lepra; and I have had one instance of its being employed in a lepra icthyosis with great success: but for reasons readily to be apprehended, I have not had opportunities of repeating the practice."[b]

[a] *Mat. Med. vol. ii. p.* 334.

[b] *L. c.*

PINUS ABIES. NORWAY SPRUCE FIR TREE.

Pix burgundica. *Pharm. Lond. & Edinb.*

SYNONYMA. Picea major prima, sive Abies rubra. *Bauh. Pin.* 493. Picea major. *Ger. Emac. p.* 1354. *Park. Theat. p.* 1538. Abies mas Theophrasti. *Raii Hist. p.* 1396. *Synop. p.* 441. P Abies. *Huds. Flor. Ang. ed.* 1. *p.* 361. Abies tenuiore folio, fructu deorsum inflexo. *Du Hamel Arb.* 1. *p.* 3. *t.* 2. The Spruce Fir Tree, *Hunter's Evelyn.* 178.

Sp. Ch. P. foliis solitariis subtetragonis acutiusculis distichis, ramis infra nudis, conis cylindraceis. *Hort. Kew.*

Pinus Abies

...olished by Phillips & Fardon, Jan.[y] 1.[st] 1805.

THIS tree somewhat resembles the former in its general appearance: the leaves are short, solitary, pointed, somewhat quadrangular, and upon the older branches incline in opposite directions: the cones are almost cylindrical, bent downwards, larger, and of a darker colour than in the preceding species.

Ray and Hudson mention this tree as a native of Scotland; but we are told in the *Flora Scotica* that the P.sylvestris is the only species of pine that grows wild in that country.

Upon an incision being made into the bark of this tree, a clear tenacious fluid issues, which concretes into a resinous substance, known by the name of *resina abietis*. This, after being boiled in water, and strained through a linen cloth, is called in the Pharmacopœias *Pix burgundica*, or Burgundy pitch. But if the boiling of the native resin is continued till the water is wholly evaporated, and wine vinegar is at this time added, a substance named *Colophonium* is formed.

Burgundy pitch, which is chiefly imported from Saxony, is of a solid consistence, yet somewhat soft, of a reddish brown colour, and not disagreeable in smell. It is entirely confined to external use, and was formerly an ingredient in several ointments and plasters. In inveterate coughs, affections of the lungs, and other internal complaints, plasters of this resin, by acting as a topical stimulus, are frequently found of considerable service.

PINUS PICEA. SILVER FIR TREE.

Terebinthina communis. *Pharm. Lond. & Edinb.*

SYNONYMA. Abies conis sursum spectantibus, seu mas. *Bauh. Pin. p.* 505. Abies. *Ger. Emac. p.* 1363. *Park. Theat. p.* 1539. Abies Taxi foliis. *Raii Hist. p.* 1394. *Synop. p.* 441. Abies foliis solitariis emarginatis, conis oblongis erectis, squamis subrotundis planis basi acuminatis. *Du Roy, Baumz. T.* 2 *p.* 95. *Hall. n.* 1657. Pinus Picea. *Huds. Flor. Ang. p.* 361. Abies taxi folio, fructu sursum spectante. *Du Hamel. Arb.* 1. *p.* 3. *t.* 1. The Silver Fir Tree, *Hunter's Evel. Sylva.* 178.

Sp. Ch. P. foliis solitariis planis emarginatis pectinatis, squamis coni obtusissimis adpressis. *Hort. Kew.*

THIS tree seldom grows to the height of the former species: its bark is closer, and that of the branches is of a shining silvery hue: the leaves are solitary, short, rigid, and on the under side marked with two longitudinal whitish lines; on the upper branches they are obtusely pointed, and grow so close as almost to conceal the bark; on the lower branches they are emarginated, and stand in a pectinated manner: the cones are upright, large, and furnished with scales, which, when young, have a membranous appendage, rising from the upper margin, but when fully formed, the scales are very obtuse, and closely embrace each other. It is a native of Switzerland and Germany; and according to the Hortus Kewensis was first cultivated in the Chelsea Garden, 1739; but as thirty-six fine trees of this species are mentioned by Plot and Ray as growing near Newport, in Shropshire, it must have been cultivated in this country at a much earlier period.

Though Linnæus, and several other writers on the Materia Medica, refer the common turpentine to the pinus sylvestris, and

Pinus Picea

Published by Phillips & Fardon, Jan.y 1st 1805.

Pinus Sinus

Published by Phillips & Fardon, June 1st 1803.

the terebinthina argentoratensis, or Strasburgh turpentine, to the Silver Fir Tree; yet, upon the authority of Murray, who follows Du Hamel and Haller, we have ascribed the terebinthina vulgaris to the pine here figured, which pours out the turpentine so freely, that it is seldom necessary to make incisions through the bark for the purpose

The medicinal uses of the different turpentines will be considered under the Pinus Larix.

PINUS LARIX. COMMON WHITE LARCH TREE.

Terebinthina veneta. *Pharm. Lond. & Edinb.*

SYNONYMA. Larix. *Bauh. Pin. p.* 493. *Ger. emac. p.* 1385. *Park. Theat. p.* 1533. Pinus foliis faciculatis deciduis, conis ovato-oblongis, squamis ovatis subscabris margine laceris. *Du Roy, Baumz. T.* 2. *p.* 61. Larix folio deciduo, conifera. *Du Hamel. Arb.* 1. *p.* 332. *t.* 131. *Bauh. Hist.* 1. *p.* 265. *Hall. Hist. n.* 1658. The Larch Tree, *Hunter's Evel.* 179.

Sp. Ch. P. foliis faciculatis mollibus obtusiusculis, bracteis extra squamas strobilorum exstantibus. *Hort. Kew.*

THE long slender pendent branches and whitish bark readily distinguish the Larch from the preceding species of pine: the leaves are deciduous, slender, soft, of a bright green colour, and placed in bundles: the cones are small, egg-shaped, covered with obtuse scales, from beneath which the bracteal leaves appear.

It is a native of Switzerland and Germany, flowering in March and April, and cultivated in England since the year 1629.

The terebinthina *veneta*, or more properly called *larigna* (as we

are not wholly supplied with this article by the Venetians) issues spontaneously through the bark of this tree, but is more commonly obtained by wounding the bark at the distance of about two feet from the ground, and inserting in the wound a small canula, through which the turpentine flows into proper vessels, which are placed for its reception.

This turpentine is usually thinner than any of the other sorts, of a clear whitish or pale yellowish colour, a hot pungent bitterish disagreeable taste, and a strong smell, without any thing of the aromatic flavour of the Chian kind—The different turpentines reserved for consideration here, are the Chian or Cyprus turpentine, obtained from Pistacia Terbinthius, (see O. Amentaceæ) 2. the Common, from the Pinus Picea: to this tree is also referred theTerebinthina argentoratensis, or Strasburgh turpentine: 3. the Venice turpentine: and here we may include the balsamum canadense, or Canada balsam, which may be considered as one of the purest of the turpentines, and is procured from the Pinus Balsamea, or Balm of Gilead Fir.

All these turpentines dissolve totally in rectified spirit, but give out little to watery menstrua: they become miscible with water, into a milky liquor, by the mediation of the yolk or white of an egg, and more effectually by mucilages. Distilled with water, they yield a notable quantity of a subtile penetrating essential oil, vulgarly called spirit; a yellow or blackish resin remaining in the still, which is the common rosin of the shops. The essential oil, on being distilled in a retort, becomes more subtile, and in this state is called ethereal oil of turpentine.

All the turpentines have been considered as hot stimulating corroborants and detergents, qualities which they possess in common.[a] They stimulate the first passages, and prove laxative; and we are told by Dr. Cullen, that half an ounce or an ounce of Venice turpentine, triturated with the yolk of an egg, and diffused in water,

[a] Venice turpentine is thought to be the most powerfully diuretic and detergent; the Cyprus and Strasburgh kinds the most corroborant.

may be employed in the form of an injection, as the most certain laxative in colics, and other cases of obstinate costiveness. When turpentine is carried into the blood-vessels, it stimulates the whole system; hence its use in chronic rheumatism and paralysis. Turpentine readily passes off by urine, which it imbues with a peculiar odour; also by perspiration, and probably by exhalation from the lungs: and to these respective effects are to be ascribed the virtues it may possess in gravelly complaints, scurvy, and pulmonic disorders. In all these diseases, however, and especially the last, this medicine, as well as some of the gums and balsams of the terebinthinate kind, by acting as stimulants, are often productive of mischief, as was first observed by Boerhaave, and since by Fothergill.

Turpentine has been much used in gleets and fluor albus; its efficacy in the former of these disorders Dr. Cullen ascribes to its inducing some degree of inflammation of the urethra; in proof of which he says, "I have had some instances, both of turpentine and balsam of copaiva, producing a manifest inflammation in the urethra, to the degree of occasioning a suppression of urine; but when these effects went off, the gleet, which had subsisted for some time before, was entirely cured."

The essential oil, in which the virtues of turpentine reside, is not only preferred for external use as a rubifacient, &c. but also internally as a diuretic; and by Pitcairn and Cheyne as a remedy for the sciatica; but few stomachs are able to bear it in the doses they direct.

Turpentine, so much used formerly as a digestive application, is in modern surgery almost wholly exploded.

JUNIPERUS SABINA. COMMON SAVIN.

SYNONYMA. Sabina. *Pharm. Lond. & Edinb.*

Varietates sunt,†

α Sabina foliis Cupressi. *Bauh. Pin. p.* 487. Sabina baccifera. *J. Bauh. Hist. vol. i. p.* 288. *Gerard. Emac. p.* 1376. Sabina baccifera major. *Park. Theat. p.* 1026. Cedrus baccifera fructu minore cœruleo. *Raii Hist. p.* 1415. Juniperus foliis cauli adpressis lanceolatis, alterne conjugatis. *Hal. Stirp. Helv. n.* 1662.

β Sabina folio Tamarisci Dioscoridis. *Bauh. Pin. p.* 487. Sabina sterilis. *Gerard. Emac. p.* 1378. Sabina vulgaris. *Park. Theat. p.* 1027. *Raii Hist. p.* 1415. Βραθυς *Græcorum.*

Class Dioecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1134.

Ess. Gen. Ch. Masc. Amenti Calyx squamæ. *Cor.* 0. Stam. 3. *Fem. Cal.* 3-partitus. *Petala* 3. *Styli* 3. *Bacca* 3-sperma, tribus tuberculis calycis inæqualis.

Sp. Ch. J. foliis oppositis erectis decurrentibus: oppositionibus pyxidatis.

THIS shrub rises but a few feet in height: it is covered with a reddish brown bark, and sends off many branches, which are numerously subdivided: the leaves are numerous, small, erect, opposite, firm, and wholly invest the younger branches, which they terminate in sharp points: the flowers are male and female on different plants: the calyces of the *male flowers* stand in a conical catkin, which consists of a common spike-stalk, in which three opposite flowers are placed in a triple row, and a tenth flower at the end. At the base of each flower is a broad short *scale* fixed laterally to a columnar

† These two varieties are precisely the same as those noticed by Dioscorides. See L. 1. C. 104.

Juniperus Sabina

Published by Phillips & Faraon

pedicle: there is no corolla: the filaments in the *terminating* flower are three, tapering, united at the bottom into one body, and furnished with simple antheræ, but in the lateral flowers the filaments are scarcely perceptible, and the antheræ are fixed to the scale of the calyx: the calyx of the *female flowers* is composed of three small permanent scaly segments, growing to the germen: the petals are three, stiff, sharp, permanent: the germen supports three styles, supplied with simple stigmata: the fruit is a roundish fleshy berry, marked with tubercles, which are the vestiges of the petals and calyx; when ripe the berry is of a blackish purple colour, and contains three small hard irregular shaped seeds. It flowers in May and June.

Savin is a native of the South of Europe and the Levant: it has been long cultivated in our gardens,[a] and from producing male and female flowers on separate plants it was formerly distinguished into the barren and berry bearing Savin: the latter of these our plate represents.[b] "The leaves and tops of Savin have a moderately strong smell of the disagreeable kind, and a hot, bitterish, acrid taste; they give out great part of their active matter to watery liquors, and the whole to rectified spirit. Distilled with water they yield a large quantity of essential oil.[c] Decoctions of the leaves, freed from the volatile principle by inspissation to the consistence of an extract, retain a considerable share of their pungency and warmth along with their bitterness, and have some degree of smell, but not resembling that of the plant itself. On inspissating the spirituous tincture, there remains an extract, consisting of two distinct substances, of which one is yellow, unctuous or oily, bitterish, and very pungent; the other black resinous, tenacious, less pungent, and subastringent." †

[a] Cultivated in 1562. Turn. herb. part 2. fol. 124 *Aiton's Hort. Kew.*

[b] For the male inflorescence of this genus, see the next plate, viz. n. 6.

[c] From thirty-two ounces Hoffman obtained five ounces of this essential oil, in which the whole virtue of the plant seems to reside. † Lewis Mat. Med.

Savin is a powerful and active medicine, and has been long reputed the most efficacious in the Materia Medica, for producing a determination to the uterus, and thereby proving emmenagogue;[d] it heats and stimulates the whole system very considerably, and is said to promote the fluid secretions.

The power which this plant possesses in opening uterine obstructions is considered to be so great, that we are told it has been frequently employed, and with too much success, for purposes the most infamous and unnatural.[e] It seems probable however that its effects in this way have been somewhat over rated, as it is found very frequently to fail as an emmenagogue, though this, in some measure, may be ascribed to the smallness of the dose in which it has been usually prescribed by physicians; for Dr. Cullen observes, " that " Savin is a very acrid and heating substance, and I have been often " upon account of these qualities, prevented from employing it in " the quantity perhaps necessary to render it emmenagogue. I must " own however that it shows a more powerful determination to the " uterus than any other plant I have employed; but I have been " frequently disappointed in this, and its heating qualities always " require a great deal of caution."[f] Dr. Home appears to have had very great success with this medicine, for in five cases of amenorrhœa which occurred at the Royal infirmary at Edinburgh, four were cured by the Sabina,[g] which he gave in powder from a scruple to a dram twice a day. He says it is well suited to the debile, but improper in plethoric habits, and therefore orders repeated bleedings before its exhibition. Externally Savin is recommended as an escharotic to foul ulcers, syphilitic warts, &c.[h]

[d] Bergius states its *virtus* to be emmenagoga, abortiens, diuretica, sanguinem movens. *Mat. Med. p.* 814.

[e] Hinc in uterino fluxu ciendo adeo potens, qua vi abusæ subinde feruntur communi fere effato, a Galeno inde tempore deducto, scelestæ matres ad abortum excitandum, sed haud absque proprio vitæ periculo vel ante partum vel mox post istum. (Storch *Hebammenb. p.* 220.) Suspectæ huic naturæ subscripsit judicium Facultatis medicæ Lipsiensis. (Ammann. *med. crit. p.* 42. See Murray *App. Med. vol. i. p.* 42. And Haller l. c.

[f] *M. M. vol. ii. p.* 366. [g] Clinical Exper .p. 387. [h] Fabre, *Mal. vener. T. i. p.* 365.

Juniperus communis

Published by Phillips & Fardon, Feb.ry 1st 1805.

JUNIPERUS COMMUNIS. COMMON JUNIPER.

SYNONYMA. Juniperus. *Pharm. Lond. & Edinb.* Juniperus vulgaris fruticosa. *Bauh. Pin. p.* 488. Juniperus vulgaris. *Park. Theat. p.* 1028. *Gerard. Emac. p.* 1372. *Raii Hist. p.* 1411. *Synop. p.* 44. Juniperus foliis convexo-concavis, aristatis, baccis alaribus, sessilibus. *Hal. Stirp. Helv. n.* 1661. *Huds. Flor. Ang. p.* 436. *Wither. Bot. Arrang. p.* 1129. *Mill. illust. ic.*

β Juniperus foliis ternis patentibus, acutioribus, ramis erectioribus, bacca longioribus. *Mill. Dict.* Swedish Juniper.

γ Juniperus minor montana, folio latiore, fructuque longiore. *Bauh. Pin.* 489. Procumbent Juniper.

Sp. Ch. J. foliis ternis patentibus mucronatis bacca longioribus.

THIS species usually rises much higher than the Sabina; it is covered with brownish bark, and divides into many branches: the leaves are very numerous, long, narrow, pointed, of a deep green colour, and stand in ternaries: the flowers are male and female on different plants, and answer to the description of those which we have given of juniperus Sabina:[a] the berries continue two years upon the tree before they become perfectly ripe, when they are of a blackish colour, round, filled with a brownish pulp, and each contain three irregular hard seeds. It grows in several heathy parts of England, and flowers in May.

[a] Of the Sabina we ought to have remarked, that the essential oil and the watery extract, are kept in the shops, and that it is an ingredient in the pulv. e. myrrha compositus.

Juniper is supposed to be the ἄρκευθος of the ancients,‖ who distinguished it into two kinds.[b] Both the tops and berries of this plant are directed for use in our Pharmacopœias, but the latter are usually preferred, and are brought to us chiefly from Holland and Italy. "They have a moderately strong not disagreeable smell, and a warm pungent sweetish taste, which if they are long chewed or previously well bruised, is followed by a considerable bitterness. The sweetness appears to reside in the juice or soft pulpy part of the berry; the bitterness, in the seeds; and the aromatic flavour, in oily vesicles, spread throughout the substance both of the pulp and the seeds, and distinguishable even by the eye. The fresh berries yield, on expression, a rich sweet honey-like aromatic juice; if previously powdered so as to thoroughly break the seeds, which is not done without great difficulty, the juice proves tart and bitter. The same differences are observable also in tinctures and infusions made from the dry berries, according as the berry is taken entire or thoroughly bruised. They give out nearly all their virtue both to water and rectified spirit. Distilled with water they yield a yellowish essential oil, very subtile and pungent, in smell greatly resembling the berries, in quantity (if they have been sufficiently bruised) about one ounce from forty: the decoction inspissated to the consistence of a rob or extract, has a pleasant, balsamic, sweet taste, with a greater or less degree of bitterishness. A part of the flavour of the berries arises also in distillation with rectified spirit: the inspissated tincture consists of two distinct substances; one oily and sweet; the other tenacious, resinous, and aromatic."[c]

‖ The odour of the Juniper-tree, though extremely fragrant, was by Virgil, thought to be noxious:

Surgamus; solet esse gravis cantantibus umbra:
Juniperi gravis umbra: nocent & frugibus umbræ.
Ecl. x. v. 75.

[b] See *Pliny. Lib. xvi. cap.* 25. Gum Sandrach, known also by the name of pounce, is the product of this species of Juniper: it exudes through the crevices of the bark, or the perforations made by insects. [c] *Lewis Mat. Med. p.* 362.

These berries are chiefly used for their diuretic effects; they are also considered to be stomachic, carminative, and diaphoretic.—Of the efficacy of Juniper berries in many hydropical affections, we have various relations by physicians of great authority, as Du Verney, Hoffman, Boerhaave, and his illustrious commentator, Baron Van Swieten, &c. Authors however seem not to be perfectly agreed which preparation of the Juniper is most efficacious, many prefer the rob or inspissated decoction, but Dr. Cullen observes,* that this is an inert medicine, alleging that to the essential oil, which is much the same as that of turpentine, only of a more agreeable odour, he thinks all the virtues ascribed to the different parts of Juniper are to be referred. Hoffman, on the contrary, strongly recommends the rob, and declares it to be of great use in debility of the stomach and intestines; and he experienced it to be particularly serviceable to such old people as are subject to these disorders, or labour under a difficulty with regard to the urinary excretion; from hence it appears, that the berries still retain medicinal powers, though deprived of the stimulating effects of the essential oil.[d] But as the Juniper is now seldom if ever relied upon for the cure of dropsies, and only called to the aid of more powerful remedies, it is justly observed by a modern author, that "perhaps one of the best forms under which the berries can be used is that of a simple infusion. This either by itself, or with the addition of a little gin, is a very useful drink for hydropic patients."[e] Medical writers have also spoken of the utility of Juniper in nephritic cases, uterine obstructions, scorbutic affections, and some cutaneous diseases, and in the two last mentioned complaints, the wood and tops of the

* *M. M. vol. ii. p.* 187.

[d] Van Swieten prescribed the following formula: ℞. Rob. Bacc. Junip. ℥ii. dilue in aquæ Junip. ℔ii. add. spirit. bacc. Junip. ℥ii. Quandoque spiritus nitri dulcis ℥ss ad sitim sedandam additur. *Comment. in Boerh. aph. T.* 4. *p.* 258. Of this mixture one or two ounces were givin every three hours.

[e] Duncan *New Ed. Dispens. p.* 214.

plant are said to have been employed with more advantage than the berries.[f]

We are told by Linnæus,[g] that the Laplanders drink infusions of the Juniper berries as we do tea and coffee, and that the Swedes prepare a beer from them, in great estimation for its diuretic and antiscorbutic qualities. Our Pharmacopœias direct the essential oil and a spirituous distillation of the Juniper berries, to be kept in the shops: the former, in doses of two or three drops, is found to be an active and stimulating medicine; the latter contains this oil, and that of some other aromatic seeds united to the spirit, and therefore differs not considerably from the genuine geneva imported from Holland; but there is great reason to believe, that the gin usually sold here is frequently nothing but the frumentaceous spirit, imbued with turpentine, or other materials to give it a flavour.

JUNIPERUS LYCIA. LYCIAN JUNIPER, or CEDAR.

Olibanum. *Pharm. Lond. & Edinb.*

SYNONYMA. Cedrus folio cupressi media majoribus baccis. *Bauh. Pin. p.* 487. Cedrus phœnicia altera Plinii & Theophrasti. *Lob. Icon.* 221. *Du Hamel, Arbres, T.* 1. *p.* 140. *V. Pallas Ross.* 1. 2. *t.* 56. *f.* 1.

Sp. Ch. J. foliis ternis undique imbricatis ovatis obtusis.

THIS species rises but to an inconsiderable height, sending off erect branches, covered with brown bark: the leaves are small, round, blunt, variously divided, and every where remarkably imbricated with small close scales: the flowers are male and female on different plants, and accord with the description which we have

[f] Bergius says, "Virtus: *ligni & summitat* diuretica, sudorifera, mundificans. *Bacca* diuretica, nutriens, diaphoretica." *M. M. p.* 810.

[g] Flor. Lapp. p. 301. They are likewise known to afford a pleasant wine. See Du Hamel, *Arbres, T. i. p.* 325.

Juniperus Lycia.

Published by Phillips & Pardon, Feb.1st 1805.

already given of the Juniperus Sabina: the berries are large, and when ripe of a dark brown colour.

It is a native of the South of Europe, and very scarce in this country; for that species called Lycia by the gardeners here, has not the scaly appearance represented in the plate before us, which was drawn from a specimen in the Herbarium of Sir Joseph Banks.

The officinal gummy resinous substance, known by the name of Olibanum, is said to ouze spontaneously from the bark of this tree, appearing in drops or tears, of a pale yellowish, and sometimes of a reddish colour.* "Olibanum has a moderately strong and not very agreeable smell, and a bitterish somewhat pungent taste: in chewing it sticks to the teeth, becomes white, and renders the saliva milky. Laid on a red-hot iron, it readily catches flame, and burns with a strong diffusive and not unpleasant smell. On trituration with water, the greatest part of it dissolves into a milky liquor, which on standing deposits a portion of resinous matter."[a] The gummy and resinous parts are nearly in equal proportions; and though rectified spirit dissolves less of the Olibanum than water, it extracts nearly all its active matter. It is brought from Turkey, and from the East Indies; but that which comes from India is less esteemed.

In ancient times Olibanum seems to have been in great repute,[b] and was chiefly used in affections of the head and breast, coughs, hæmoptysis, and in various fluxes both uterine and intestinal: it was also much employed externally. Riverius found it of great efficacy in pleurisies, which were said to be epidemic; and Geoffroy[c] likewise experienced its success in these diseases, especially after venesection; at present, however, recourse is seldom had to this medicine, which is now superseded by myrrh, and other articles of a less stimulating kind.

* This drug has received different appellations according to its different appearances: the single tears are called simply *olibanum*, or *thus*: when two are joined together, *thus masculum*; and when two are very large, *thus femininum*: if several adhere to the bark, *thus corticosum*: the fine powder, which rubs off from the tears, *mica thuris*; and the coarser *manna thuris*.

[a] *Lewis, M. M. p.* 460.

[b] It is the λιβανος of Theophrastus & Dioscorides, λιβανωτος of Hippocrates.

[c] *Mat. Med. Traité. T.* 4. *p.* 71.

ORD. II. AMENTACEÆ.

From *Amentum* (ab αμμα, vinculum, a bond or thong) in English Catkin; a term used by Linnæus to denote a species of calyx which is confined to certain trees and shrubs.

SALIX FRAGILIS. CRACK WILLOW.

SYNONYMA, Salix. *Pharm. Edinb.* Salix folio longo latoque splendente, fragilis. *Raii Synop. p.* 448. Salix Fragilis. *Bauh. Pin. p.* 474. *Hall. Stirp. Helv. n.* 1638. *Huds. Flor. Ang. p.* 426. *Wither. Bot. Arr. p.* 1102. *Relh. Flor. Cant. p.* 365. *Flor. Lap. t.* 8. *f.* 6. *Hunter's Evelyn's Sylva, p.* 245.

Class Dioecia. *Ord.* Diandria. *Lin. Gen. Plant.* 1098.

Ess. Gen. Ch. Masc. Amenti squamæ. *Cor.* 0. *Glandula* baseos nectarifera.

Fem. Amenti squamæ. *Cor.* 0. *Stylus* 2-fidus. *Caps.* 1-locularis, 2-valvis. *Sem.* papposa.

Sp. Ch. S. foliis serratis glabris ovato-lanceolatis, petiolis dentato-glandulosis.

Salix fragilis.

Published by Phillips & Fardon, Feb.ry 1st 1808.

THIS species grows to a considerable height, sending off large branches, and is covered with wrinkled bark of a grey colour: the leaves are long, narrow, ovate, or lance-shaped, serrated, and placed upon footstalks, which are furnished with glandular teeth: the flowers are male and female upon different trees, and produced in catkins: the calyx, or common catkin of the male flower, is oblong, imbricated, inclosed by an involucrum formed of a bud, and consisting of scales, which are oblong, flat, expanding, and unifloral: there is no corolla: the nectarium is a small cylindrical truncated gland, containing honey, and placed in the centre of the flower: the filaments are two, straight, filiform, longer than the calyx, and furnished with double antheræ of four cells: in the female flower the scaly catkin resembles that of the male: the germen is egg-shaped, tapering, so as to leave no distinct style, and is longer than the scales: the stigmata are two, bifid and erect: the capsule is ovate, one-celled, and furnished with two valves, which roll back: the seeds are numerous, egg-shaped, very small, and crowned with a simple hairy pappus. The flowers appear in April and May.

This tree, which grows in hedges and about the banks of rivers in several parts of England, is easily to be distinguished from the other species of willow, by the readiness with which it breaks at the year's shoot last made upon being slightly struck with the finger; and hence the name *fragilis*.

The bark of the branches of this tree manifests a considerable degree of bitterness to the taste, and is also astringent; hence it has been thought a good substitute for the Peruvian bark, and upon trial was found to stop the paroxysms of intermittents:[a] it is likewise recommended in other cases requiring tonic or astringent

[a] See *Gerhard. Mat. Med. p.* 301. *Phil. Trans. vol.* 53. *p.* 195. And *Medical Comment. vol.* 5. *p.* 298. Instances of the efficacy of Willow bark are also related by Clossius *(nov. variol. Med. Meth. p.* 128.) And Gunz. *Diss. binæ de cortice salicis. Lips.* 1772.

With Bergius however this bark did not succeed. He says, Ego hunc corticem in febribus intermittentibus iterum iterumque exhibui, sed irrito conatu.

remedies. Not only the bark of this species of Salix, but that of several others, possess similar qualities, particularly of the Salix alba and S. pentandria, both of which are recommended in the foreign pharmacopœias. But in our opinion the bark of the S. triandria is more effectual than that of any other of this genus; at least its sensible qualities give it a decided preference.

JUGLANS REGIA. COMMON WALNUT-TREE.

SYNONYMA. Juglans. *Pharm. Lond.* Nux Juglans sive regia vulgaris. *Bauh. Pin. p.* 417. *Tourn. Inst. p.* 501. Nux Juglans. *Gerard. Emac. p.* 1440. *Raii Hist. p.* 1376. *J. Bauh. Hist. vol. i. p.* 241. Nux Juglans vulgaris. *Park. Theat. p.* 1413. Juglans foliis septenis, ovato-lanceolatis, integerrimis. *Hal. Stirp. Helv. n.* 1624. Juglans Regia. *Ic. Mill. Illust. Cramer Forstwesen. tab.* 22. *Du Ham. Arb. 2. p.* 50. *t.* 13. *Hunt. Evel.*

Class Monoecia. *Ord.* Polyandria. *Lin. Gen. Plant. p.* 1071.

Ess. Gen. Ch. *Masc. Cal.* 1-phyllus, squamiformis. *Cor.* 6-partita. *Filamenta,* 18.

Fem. *Cal.* 4-fidus, superus. *Cor.* 4-partita. *Styli* 2. *Drupa,* nucleo sulcato.

Sp. Ch. J. foliolis ovalibus glabris subserratis subæqualibus.

THIS is a large tree, and usually sends off many strong spreading branches, covered with a greyish bark: the leaves are large, pinnated, composed of several pairs of opposite pinnæ, with an odd one at the end; they are oval, entire, nerved, veined, pointed, of a pale green

Juglans regia

Published by Phillips & Fardon Feb.1st 1803.

colour, and stand upon short footstalks: the flowers are male and female upon the same tree, appearing in April and May, and the fruit ripens about the end of September: the *male flowers* are placed in a close cylindrical catkin: the calyx is monophyllous and squamous: the corolla is divided into six oval petals: the filaments are numerous, (about eighteen) short, and furnished with erect pointed antheræ: the *female flowers* are generally three together: the calyx is divided into four segments, which are erect, short, evanescent, and stand upon the germen: the corolla is separated into four segments, which are pointed, erect, and longer than the calyx: the germen is oval, and placed below the corolla: the two styles are very short: the stigmata are large, expanding, reflexed, and indented: the fruit is of the drupous kind, large, unilocular, containing a large roundish nut, which is too well known to require a description here.

This tree, which is a native of Persia, has been long cultivated in this country, and bears our winters very well. Linneus describes its leaves as somewhat serrated; but this we have never observed, and therefore with Haller would rather substitute the word integerrimis for subserratis. The wood is of a dark colour, and beautifully variegated, especially that of the root, and by being hard enough to admit of polishing, was much used by Cabinet-makers before the introduction of mahogany.

The unripe fruit,[a] which has an astringent bitterish taste, and has been long used as a pickle, is the part directed for medicinal use by the London College, on account of its anthelmintic virtues. Its effects in destroying worms seem confirmed by the testimony of several authors:[b] and in proof of its possessing this vermifuge power, we are told that water, in which the green shells of Walnuts have

[a] We may notice for curiosity a notion which formerly prevailed: Ut nuces in proximum annum copiosiùs proveniant, mos est hodie apud rusticos quosdam, ut nuces perticis decutiantur. Hinc non inconcinnè quidam alludendo cecinit,

Nux, asinus, mulier simili sunt lege ligata;
Hæc tria nil fructûs faciunt, si verbera cessant. Vide *Ray, l. c.*

[b] Plater, Fischer, Andry, and others.

been macerated, on being poured in a garden, was found to drive all the earth worms together as far as the water extended,[c] and that the worms by being immersed in a strong infusion of these shells were immediately seized with spasms, and died in two minutes afterwards.[d] An extract of the green fruit is the most convenient preparation, as it may be kept for a sufficient length of time, and made agreeable to the stomach of the patient by mixing it with cinnamon-water. This fruit, in its immature state, is also said to be laxative,[e] and of use in apthous affections and sore throats.* To answer these purposes, the Wirtemberg Pharm. directs a rob to be prepared of its juice.

The kernel of the Walnut[f] is similar in qualities to that of the almond and hazel-nut, and affords an oil which amounts to half the weight of the kernel: according to De la Hire,[g] this oil does not congeal by cold, and answers the medicinal purposes of the oil of almonds.

[c] Car. Stephan. *Agricult. lib.* 3. *c.* 13. Andry, *Generation des vers. p.* 142. J. G. Fischer, *Comm. de vermibus in C. H. et anthelmintico. Stadæ.* 1751. *p.* 14.

[d] Fischer, *l. c.* [e] Bergius, *M. M. p.* 744.

* Vinegar, in which Walnuts have been pickled, we have found to be a very useful gargle.

[f] *De la Glace. p.* 499.

[g] According to the Salernitan maxim, nuts, eaten after fish, promote digestion.

"Post pisces nux sit, post carnes caseus esto."

Quercus Robur

Published by Phillips & Fardon Feb.y 1.st 1806

QUERCUS ROBUR. COMMON OAK.

SYNONYMA. Quercus. *Pharm. Lond. & Edinb.* Quercus cum longo pediculo. *Bauh. Pin. p.* 420. Quercus vulgaris. *Gerard Emac. p.* 1340. Quercus latifolia. *Park. Theat. p.* 1386. Quercus vulgaris longis pediculis. *J. Bauh. Hist. vol. i. p.* 70. *Raii Hist. p.* 1385. *Synop. p.* 440. Quercus Robur. *Evel. Sylv.* by *Hunter, ed.* 2. *p.* 67. *Du Roy, Baumz. t. ii. p.* 236. *Huds. Ang. p.* 421. *Withering, Bot. Arr. p.* 1083. *Hall. Stirp. Helv. n.* 1626.

α Arborea, pedunculis elongatis (pedunculata) *Aiton, Hort. Kew.* *Female Oak Tree.*

β Arborea, fructibus subsessilibus (sessilis) *Aiton, Hort. Kew.* *Common Oak Tree.*

γ Frutescens, ramis virgatis, fructibus sessilibus (humilis) *Aiton. l. c.* *Dwarf Common Oak Tree.*

Class Monoecia. *Ord.* Polyandria. *Lin. Gen. Plant.* 1070.

Ess. Gen. Ch. *Masc. Cal.* 5-fidus fere. *Cor.* 0. *Stam.* 5-10. *Fem. Cal.* 1-phyllus, integerrimus, scaber. *Cor.* 0. *Styli* 2-5. *Sem.* 1, ovatum.

Sp. Ch. Q. foliis oblongis glabris sinuatis: lobis rotundatis, glandibus oblongis. *Aiton. Hort. Kew.*

THIS tree frequently rises to a very considerable height,[a] sends off

[a] An Oak tree, in the parish of Little Shelsley, Worcestershire, measured in circumference, at about two yards from the ground, 22 feet 4 inches, and close to the ground nearly 48 feet, (Hollefear).—Of one growing in 1764. in Broomfield Wood, near Ludlow, Shropshire, the trunk measured 68 feet in girth, and 23 in length: this tree, allowing 90 square feet for the larger branches, contained 1455 feet of thick timber. (Lightfoot).—The girth of the Green Dale Oak, near Welbeck, at eleven feet from the ground, was 28 feet: and one growing at Cowthorpe, near Wetherby, Yorkshire, measured 78 feet in circumference close to the ground. (Hunt. Evel.) See *Withering, l. c.*

This reminds us of the Oak alluded to by Virgil:

——— & quantùm vertice ad auras
Ætherias, tantùm radice in Tartara tendit. *Æn. l. iv.* 445.

strong branches, and is covered with rough brown bark: the leaves are oblong, broader towards the end, deeply cut or sinuated at the edges, forming obtuse lobes, and stand upon short footstalks: the flowers are very small, and are male and female upon the same tree: the calyx of the *male flowers* is divided into five, six, or seven segments, which are pointed, and often cloven: there is no corolla; the filaments are from five to ten, and supplied with large double antheræ: the calyx of the *female flower* is membranous, hemispherical, and composed of numerous imbricated pointed segments: there is no corolla: the germen is oval: the styles from two to five, and furnished with simple permanent stigmata: its fruit is a nut, which is oblong, fixed to a short cup, and ripens in October, but the flowers appear in April.

This valuable tree is well known to be a native of Britain, where it has in some instances acquired an extraordinary magnitude: its wood is of general use in carpentry, and by uniting hardness with such a degree of toughness as not easily to splinter, has been long justly preferred for the purpose of building ships.[b]

The astringent effects of the Oak were sufficiently known to the ancients, by whom different parts of the tree were used; but it is the bark which is now directed for medicinal use by our pharmacopœias. To this tree we may also refer the Gallæ, or Galls, which are produced from its leaves by means of a certain insect.

Oak bark manifests to the taste a strong astringency, accompanied with a moderate bitterness, qualities which are extracted both by water and by rectified spirit. Its universal use and preference in the tanning of leather is a proof of its great astringency, and like other astringents it has been recommended in agues, and for restraining hæmorrhagies, alvine fluxes, and other immoderate evacuations. A

[b] Oak saw-dust is the principal indigenous vegetable used in dying fustain. All the varieties of drabs, and different shades of brown, are made with oak saw-dust, variously managed and compounded. Oak apples are likewise used in dying, as a substitute for galls. An infusion of the bark, with a small quantity of copperas, is used by the common people to dye woollen of a purplish blue, which is sufficiently durable. *Withering, l. c.*

decoction of it has likewise been advantageously employed as a gargle, and as a fomentation or lotion in procidentia recti et uteri. Dr. Cullen tells us, that he has frequently employed the decoction with success in slight tumefactions of the mucous membrane of the fauces, and in many prolapsus uvulæ, and cynanche tonsillaris, to which some people are liable upon the least exposure to cold: and in many cases this decoction, early applied, has appeared useful in preventing these disorders. It must be remarked however, that the Dr. almost constantly added a portion of alum to these decoctions.[c]

Some have supposed that this bark is not less efficacious than that of the Cinchona, especially in the form of extract; but this opinion now obtains little credit, though there be no doubt that Oak bark may have the power of curing intermittents.[d]

Galls, which in the warm climate of the East are found upon the leaves of this tree, are occasioned by a small insect, with four wings, called *Cynips querci folii,* which deposits an egg in the substance of the leaf, by making a small perforation through the under surface. The ball presently begins to grow, and the egg in the centre of it changes to a worm; this worm again changes to a nymph, and the nymph to the flying insect above mentioned,* which by eating its passage out leaves a round hole: and those galls which have no holes, are found to have the dead insect remaining in them.

[c] Dr. Cullen tried also a solution of the alum alone, "but it did not prove so effectual." See *Mat. Med. vol. ii. p.* 45.

[d] "I have employed the Oak bark in powder, giving it to the quantity of half a dram every two or three hours during the intermissions of a fever; and, both by itself, and joined with camomile flowers, have prevented the return of the paroxysms of intermittents." *Cullen, l. c.*

* Many other excrescences are produced on this tree, and the insects which inhabit it are very numerous. For an enumeration of these, see *Withering, l. c.*

The Oak in some parts of the East distils a species of manna, so that the words of Virgil seem literally verified: —

"Et duræ quercus sudabunt roscida mella." *Ecl. iv.* 30.

Two sorts of galls are distinguished in the shops, one said to be brought from Aleppo, the other from the southern parts of Europe. The former are generally of a bluish colour, or of a greyish, or black, verging to blueness, unequal and warty on the surface, hard to break, and of a close compact texture: the others are of a light brownish or whitish colour, smooth, round, easily broken, less compact, and of a much larger size. The two sorts differ only in strength, two of the blue galls being supposed equivalent in this respect to three of the others.[e]

Galls appear to be the most powerful of the vegetable astringents, striking a deep black when mixed with a solution of ferrum vitriolatum, and therefore preferred to every other substance for the purpose of making ink. As a medicine, they are to be considered as applicable to the same indications as the Oak bark, and by possessing a greater degree of astringent and styptic power, seem to have an advantage over it and to be better suited for external use. Reduced to fine powder, and made into an ointment, they have been found of great service in hæmorrhoidal affections.[f] Their efficacy in intermittent fevers was tried by Mr. Poupart, by order of the Academy of Sciences, and from his report it appears, that the Galls succeeded in many cases; and also that they failed in many other cases, which were afterwards cured by the Peruvian bark.[g]

[e] *Lewis, M. M.* [f] See *Cullen, l. c.* [g] See *Mem. pour l'an.* 1702.

PISTACIA LENTISCUS. MASTICH TREE.

Ex qua fluit *Mastiche. Pharm. Lond. & Edinb.*

SYNONYMA. Lentiscus vulgaris. *Bauh. Pin. p.* 399. *Tournf. Inst. p.* 580. Lentiscus. *Clus. Hist. i. p.* 14. *Dod. Pempt. p.* 871. *Du Hamel. Arb. t. i. tab.* 136. *Conf. Tournef. Voyage du Levant. p.* 144.

Pistacia Lentiscus

Published by Phillips & Fardon, March 1st 1803.

β Pistacia *massiliensis*, foliis abrupte pinnatis: foliolis lineari-lanceolatis. *Mill. Dict.*

Narrow-leaved Mastich Tree. *Aiton. Hort. Kew.*

Class Dioecia. *Ord.* Pentandria. *Lin. Gen. Plant.* 1108.

Ess. Gen. Ch. *Masc.* Amenti. *Cal.* 5-fidus. *Cor.* 0.
Fem. distincta. *Cal.* 3-fidus. *Cor.* 0. *Styli* 2. *Drupa* monosperma.

Sp. Ch. P. foliis abrupte pinnatis: foliolis lanceolatis.

THIS tree, which seldom exceeds a foot in diameter, rises ten or twelve feet in height; it is covered with a smooth brown bark, and towards the top sends off numerous branches: the leaves are regularly pinnated, and consist of several pairs of narrow ovate opposite pinnæ, closely attached to the common footstalk, which is winged or supplied with a narrow foliaceous expansion: the male flowers are placed in an amentum or open catkin: the calyx (proper) is divided into five minute ovate segments: the filaments are five, sometimes four, very short: the antheræ are large, brown, erect, and of a quadrangular form: the female flowers, like those of the male, have no corolla, and are placed upon the common peduncle in alternate order: the calyx consists of three small squamous segments: the germen is egg-shaped, larger than the calyx, and supports two or three styles, terminated by reflexed clubbed stigmata: the fruit is of the drupous kind, containing an egg-shaped smooth nut. The flowers appear in May, and the fruit ripens in August.

This tree, which is a native of the South of Europe and the Levant, appears by Evelyn's Kalendarium Hortense to have been cultivated in Britain in 1664;[a] but in this country it is of slow vegetation, and seldom healthy enough to give us a competent idea of the plant in its natural situation, so that we have been enabled to publish

[a] See *Aiton's Hort. Kew.*

a more correct figure of the Lentiscus, from a dried specimen of it in the Linnean Herbarium, than could have been done from the living plant as found in any of the gardens in the vicinity of London.[b]

In the island of Chio, the officinal Mastich is obtained most abundantly, and, according to Tournefort,[c] by making transverse incisions in the bark of the tree; from whence the Mastich exudes in drops, which are suffered to run down to the ground, when, after sufficient time is allowed for their concretion, they are collected for use. The time chosen for making these incisions is the first of August, when the weather is very dry; on the following day the Mastich begins to appear in drops, which continue to exude till the latter end of September.[d]

Mastich is a resinous substance, brought to us in small yellowish transparent brittle grains or tears: "it has a light agreeable smell, especially when rubbed or heated: on being chewed, it first crumbles, soon after sticks together, and becomes soft and white, like wax, without impressing any considerable taste. It totally dissolves, except the earthly impurities, which are commonly in no great quantity, in rectified spirit of wine, and then discovers a degree of warmth and bitterness, and a stronger smell than that of the resin in substance. Boiled in water, it impregnates the liquor with its smell, but gives out little or nothing of its substance; distilled with water, it yields a small proportion of a limpid essential oil, in smell very fragrant, and in taste moderately pungent. Rectified spirit brings over also in distillation, the more volatile odorous matter of the Mastich."[e]

[b] The only tree of this species which we have observed to flower in England, is a male plant in the Apothecaries garden at Chelsea, where many rare and valuable plants have been long successfully cultivated.

[c] *Voyage du Levant. t. i. p.* 44. See also Du Hamel, *l. c.* De la Motraye, *Voyage &c. t. i. p.* 190. *Thevenot's Levant, p.* 180. Hasselquist *Resa. p.* 532.

[d] Vers le fin de Septembre les mêmes incisions fournissent encore du Mastic, mais en moindre quantité. *Tourn. l. c.*

[e] *Lewis, M. M. p.* 413.

Pistacia Terebinthus

. Published by Phillips & Fardon, March. 1st 1805.

It is a common practice with the Turkish women to chew this resin, especially in the morning, not only to render their breath more agreeable, but to whiten the teeth, and strengthen the gums;[f] they also mix it with their fragrant waters, and burn it with other odoriferous substances in the way of fumigation.

As a medicine, Mastich is considered to be a mild corroborant and astringent; and as possessing a balsamic power, it has been recommended in hæmoptysis, proceeding from ulceration, fluor albus, debility of the stomach, and in diarrhœas and internal ulcers.[g] Chewing this drug has likewise been said to have been of use in pains of the teeth and gums, and in some catarrhal complaints; it is now however seldom used either externally or internally.

The LENTISCI *lignum*, or wood of this tree, is received into the Materia Medica of some of the Foreign Pharmacopœias, and is highly extolled in dyspeptic, gouty, hæmorrhagic, and dysenteric affections.[h]

[f] *Lib. cit.*

[g] Degner *(de dysenteria. p.* 201.*)* gave it successfully in these complaints, in doses of ten grains to a scruple, both in substance and in the way of emulsion.

[h] See *Ephem. Nat. Cur. Dec.* 3. *A.* 9. 10. *Obs.* 135. where it is dignified with the title of vegetable aurum potabile.

PISTACIA TEREBINTHUS. CHIAN or CYPRUS TURPENTINE TREE.

Ex qua fluit Terebinthina chia. *Pharm. Lond.*

SYNONYMA. Terebinthus vulgaris. *Bauh. Pin. p.* 400. *Tournef. Inst. p.* 579. Terebinthus. *Clus. Hist. p.* 15. *Dod. Pempt. p.* 871. *Gerard. Emac. p.* 1433. *Raii Hist. p.* 1577 Terebinthus angustiore folio vulgatior. *Park. Theat. p.* 1526. Ic. *Du Hamel Arbres. t.* 2. *tab.* 87.

Class Dioecia. *Ord.* Pentandria. *Lin. Gen. Plant.* 1108.

Ess. Gen. Ch. *Masc.* Amenti. *Cal.* 5-fidus. *Cor.* 0.

Fem. Distincta. *Cal.* 3-fidus. *Cor.* 0. *Styli* 2.
Drupa monosperma.

Sp. Ch. P. foliis impari-pinnatis: foliolis ovato lanceolatis.

THIS is a much larger tree than the preceding species; it sends off many long spreading branches,* and is covered with smooth bark: the leaves are pinnated, consisting of ovate lance-shaped, veined, entire, opposite pinnæ, with an odd one at the end: the flowers are male and female on different trees, and in their essential parts correspond with the description given of those of the P. Lentiscus. It is a native of Barbary and the South of Europe, and has been cultivated in Britain more than sixty years.† It is more hardy than the P. Lentiscus, and if planted against a wall, it bears our winters very well.

Cyprus, or Chian Turpentine, which this tree furnishes, is procured by wounding the bark of the trunk of the tree, in several places, in the month of July, leaving a space of about three inches between each wound; from these the Turpentine issues, and is received upon stones, which are placed at the bottom of the tree for this purpose, and upon which it becomes so much condensed by the coldness of the night, as to admit of being scraped off with a knife in the morning, which is always to be done before the sun rises: after this, in order to free it of all extraneous admixture, it is again liquified by the sun's heat, and passed through a strainer, when it is

* Le Brun tells us that it was "le Terebinthe qui se courba pour donner plus d'ombre à la S. Vierge, lors qu'allant de Bethlehem à Jerusalem pour porter son Fils au Temple, elle se voulut reposer sous cet arbre." See *Voyage au Levant. p.* 284.

† See a Catalogue of Trees, Shrubs, &c. which are propagated for sale in the gardens near London, published in 1730, p. 78. Terebinthus i. *Aiton's. Hort. Kew.*

fit for use.[a] The quantity of this Turpentine produced from each tree, is very inconsiderable, in so much that it has been observed that four large trees, sixty years old, whose trunks measured five feet in circumference, only yielded two pounds nine ounces and six drams; but in the eastern parts of the islands, the names of which this Turpentine bears, the trees afford somewhat more, though still so little as to render it very costly, and on this account it is commonly adulterated, especially with other Turpentines. The best Chio Turpentine is generally about the consistence of thick honey, very tenacious, clear, and almost transparent; of a white colour, inclining to yellow, and a fragrant smell, moderately warm to the taste, but free from acrimony and bitterness. The medicinal and other qualities of the Turpentines will be considered together under the species of Pinus See Index.

[a] See Du Hamel, *l. c. p.* 308. and Tournefort, *Voyage du Levant. t. i. p.* 145.

ORD. III. COMPOSITÆ.

This Order comprehends those plants which bear compound flowers, or a number of florets formed into one head, within a common calyx, and placed upon the same receptacle.

ARCTIUM LAPPA. BURDOCK.

SYNONYMA. Bardana. *Pharm. Lond. & Edinb.* Lappa. *Hal. Stirp. Helv.* n. 161. Lappa seu Personata. *Raii Hist.* p. 332. Lappa Major, Arctium Dioscoridis. *Bauh. Pin.* 198. Personata. *Camerar Epit.* 887. Bardana major. *Ger. emac.* 809. Arctium Lappa. *Huds.* 348. *Withering.* 694. *Smith.* 844. *Curt. Flor. Lond. Relhan Cant.* 302. *Withering. B. A.* 163. Αρκειον, Αρκειλιον *Græcor.* Varietates sic se habent. *Hort. Kew.* vol. 3. p. 136.

α Lappa major capitulo glabro maximo. *Raii Syn.* 196.
Smooth-headed Common Burdock.

β Lappa major montana, capitulis tomentosis. *Bauh. Pin.* 198.
Woolly-headed Burdock.

Class Syngenesia. *Ord.* Polygamia Æqualis. *L. Gen. Pl.* 923.

Ess. Gen. Ch. *Cal.* globosus: squamis apice hamis inflexis.

Sp. Ch. A. foliis cordatis inermibus petiolatis.

Arctium Lappa.

THE root is biennial, subcylindrical, long, simple, externally of a dark brown colour, internally white, and sends off many slender fibres: the stalk is erect, roundish, grooved, villous, purplish, above an inch in diameter, three feet high, and alternately branched: the leaves are alternate, patent, heart-shaped, veiny, above of a dark green colour, underneath whitish; the lower leaves are very large, and stand upon long footstalks, which are grooved like the stem: the calyx is common to all the florets, imbricated, globular, the exterior scales are entangled in fine woolly threads, firm, elastic, and their extremities are polished and hooked; the flowers are numerous, disposed in heads, and stand alternately upon footstalks on the branches; the corolla is compound, the florets purple, tubular, each having the limb divided into five pointed segments; the stamina are five, white, and filiform; the antheræ unite into a tube, are of a bluish colour, and project beyond the corolla; the germen is somewhat triangular, the styles white, and longer than the stamina, and the stigma bifid: the seeds are oblong, brown, and have irregular rough surfaces.

This plant is common in waste grounds and road sides; it flowers in July and August, and is well known by the burs, or scaly heads, which stick to the clothes, a circumstance from whence the word Lappa is supposed to be derived.‡ The Pharmacopœias direct the root for medicinal use: it has no smell, but tastes sweetish, and mixed as it were with a slight bitterishness and roughness. Its virtue, according to Bergius, is mundificans, diuretica, diaphoretica;[a] and many instances are upon record in which it has been successfully employed in a great variety of chronic diseases, as scurvy, rheumatism, gout, lues venerea, and pulmonic complaints.[b] We have never had an opportunity of observing the effects of this root, except as a

‡ Lappa dici potest vel *απο τυ λαβειν* prehendere vel *λαπτειν* lambere. Ray, l. c.

[a] Mat. Med. 653. [b] Henricus III. Galliarum Rex, a Petro Penà decocto radicum Lappæ ab hac lue sanatus fuit. Vide Reverius, Obs. 41.

The young stems of this plant, stripped of their rind, are boiled and eat like asparagus. When raw, they are good with oil and vinegar. Withering, 864. l. c.

diuretic, and in this way we have known it succeed in two dropsical cases, where other powerful medicines had been ineffectually used: and as it neither excites nausea nor increases irritation, it may occasionally deserve a trial where more active remedies are improper. The seeds also possess a diuretic quality, and have been given with advantage in the dose of a dram in calculous and nephritic complaints, and in the form of emulsion as a pectoral. The root is generally used in decoction, which may be made by boiling two ounces of the fresh root in three pints of water to two, which, when intended as a diuretic, should be taken in the course of two days, or if possible in twenty-four hours.

CENTAUREA BENEDICTA. BLESSED, or HOLY THISTLE.

SYNONYMA. Carduus benedictus. *Pharm. Lond. & Edinb. Gerard Emac.* p. 1171. *J. Bauh.* iii. 77. *Park. Parad.* p. 530. *Raii Hist.* 1303. *Dodon Pempt.* 725. *Camer. Epit.* 562. Cnicus sylvestris hirsutior sive Carduus benedictus. *Bauh. Pin.* 378.

Class Syngenesia. *Ord.* Polygamia frustranea. *Lin. Gen. Plant.* 984.

Ess. Gen. Ch. Recept. setosum. *Pappus* simplex. *Cor.* radii infundibuliformes, longiores, irregulares.

Sp. Ch. C. calycibus duplicato-spinosis lanatis involucratis, foliis semidecurrentibus denticulato-spinosis.

THE root is annual, cylindrical, whitish, branched, and furnished with several slender fibres: the stalk is erect, roundish, channelled, rough, from one to two feet high, and often branched towards the top: the leaves are long, elliptical, rough, runcinated, or variously serrated, and barbed with sharp points; above of a bright green colour, underneath whitish, and reticulated: the upper leaves are

Centaurea Benedicta

sessile, and on one side extend along the stalk, but the lower leaves stand upon footstalks: the flowers are enclosed by an involucrum of ten leaves, of these the five external ones are the largest: the calyx is oval, imbricated, smooth, woolly, and consists of several squamous coverings, terminated by rigid, pinnated, spinous points: the flowers are compound, or composed of several yellow florets; those at the circumference want the parts necessary to fructification, but those at the centre are hermaphrodite, tubular, unequally divided at the limb, and dentated at their upper extremities: the filaments are five, tapering, white, downy, and inserted in the base of the corolla: the antheræ are cylindrical, tubulous, brownish, striated, and somewhat longer than the corolla: the style is filiform, and of the same length as the stamina: the stigma is yellow and cloven: the seeds are oblong, brown, striated, bent, and crowned with a hairy wing or feather, similar to that of the receptacle. It is a native of Spain and the Levant, and flowers in June and September.

The first account of the cultivation of this plant in England is given by Gerard, in 1597, and it is now usually cultivated with other exotic medicinal simples. It has an intensely bitter taste, accompanied with an unpleasant smell, which it loses upon being well dried. "Cold water, poured on the dry leaves, extracts in an hour or two a light grateful bitterness: by standing long upon the plant the liquor becomes disagreeable. Rectified spirit in a short time extracts the lighter bitter of the Carduus, but does not take up the nauseous so easily as water."[a] The watery extract, by keeping, produces a salt upon its surface, which resembles nitre.[b]

This plant obtained the appellation of Benedictus, from its being supposed to possess extraordinary medicinal virtues; for exclusive of those qualities which are usually attributed to bitters, it was thought to be a very powerful alexipharmic, and capable of curing the plague, and other fevers of the most malignant kind;[c] but its

[a] Lewis Mat. Med. p. 195.

[b] Sal commune continere albi. Hist. de l'Acad. des Sc. de Berlin, 1747, p. 79.

[c] Matthiol. in Dioscor. p. 597.

good effects in this way have now as little credit as those of its external use, by which cancers and carious bones are said to have been healed.[d] Bergius reports, that it is antacida, corroborans, stomachica, sudorifera, diuretica, eccoprotica; and that it is useful in Anorexia, Cachexia, Cephalalgia sympatica, Arthritis, Febres intermittentes. We might however, with equal propriety, attribute these virtues to many other simple bitters, from which the Carduus does not seem to be peculiarly different. In loss of appetite, where the stomach was injured by irregularities, the good effects of the Carduus have been frequently experienced.[e] Formerly it was a common practice to assist the operation of emetics, by drinking an infusion of the Carduus; but the flowers of chamomile have since been substituted for this purpose, and probably may be advantageously done for several others in which the Carduus is recommended. The seeds have also been employed in emulsion with the same intention as the leaves.

[d] J. Bauh. hist. tom. 3. p. 79. Arnold de Villa Nova *pract.* c. 44.

[e] Duncan Edinb. New Dispens.

ACHILLEA MILLEFOLIUM. COMMON YARROW; Or, MILFOIL.

SYNONYMA. Millefolium. *Pharm. Edinb.* Millefolium vulgare album. *Bauh. Pin.* p. 140. Millefolium terrestre vulgare. *Gerard. Emac.* p. 1072. Millefolium vulgare. *Park. Theat.* p. 693. *Raii Hist.* p. 345. *Synop.* p. 183. Achillea foliis pinnatis, pinnis longe æqualibus, pinnatis, pinnulis trifidis et quinquefidis. *Hal. Stirp. Helv. n.* 107. *A. M. Wither. Bot. Arrang.* p. 941, *Curtis Flor. Lond.* 6. *t.* 61. *Huds.* 374. *Smith. Fl. Brit.* 908.

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 971.

. Achillea . Millefolium.

Published by Phillips & Fardon, Newport 1 1831.

Ess. Gen. Ch. *Recept.* paleaceum. *Pappus* nullus. *Cal.* ovatus imbricatus. *Flosculi* radii circiter quinque.

Sp. Ch. A. foliis bipinnatis nudis; laciniis linearibus dentatis; caulibus superne sulcatis.

THE root is perennial, creeping, round, and furnished with many whitish fibres:[a] the stalk is upright, round, towards the bottom smooth and downy, but near the top it is slightly grooved, woolly, branched, and rises above a foot in height: the leaves stand alternately upon the stem, which they partly embrace, and are bipinnated or subdivided into a double series of pinnæ: the pinnulæ are numerous, narrow, and somewhat pointed: the flowers are white, or tinged with purple, and terminate the stem in a close corymbus: the bracteæ are small, pinnatifid, and placed at the peduncles: the calyx is ovate, downy, imbricated with concave oval scales, which are membranous, and fringed at the margins: the corolla is compound, and radiated; at the *disc* the florets are about twelve, hermaphrodite, funnel-shaped, of the length of the calyx, consisting of a long yellowish tube, divided at the limb into five short segments: at the *radius* the florets are female, usually five, flat, spreading, roundish, cut at the apex into three teeth, and furnished with a cylindrical, greenish, striated tube, which is about the length of the calyx: the filaments are five, short, and slender: the antheræ are yellow, and unite into a cylindrical tube: the germen is oblong, compressed, and supports a filiform style, divided into two reflexed stigmata. It is common in dry pastures, and flowers from July till October.

The leaves and flowers of this plant have an agreeable weak aromatic smell, and a bitterish, rough, and somewhat pungent taste. "The virtue of both is extracted by watery and spirituous menstrua; the astringency most perfectly by the former; their aromatic warmth

[a] Dr. Grew observes, that the fresh young roots have a glowing warm taste, approaching to that of Contrayerva, and thinks they might in some measure supply its place.—*On Tastes, chap.* 5. §. 2.

and pungency by the latter; and both of them equally by a mixture of the two. The flowers, distilled with water, yield a penetrating essential oil, possessing the flavour of the Milfoil in perfection, though rather less agreeable than the flowers themselves."*

This plant appears to be the Στρατιωτης χιλιοφυλλος ‖ of the Greek writers, by whom it was esteemed an excellent vulnerary † and styptic, and was generally employed internally as an useful astringent in all hæmorrhagic complaints. Instances of its good effects in this way[b] are likewise mentioned by several of the German physicians, particularly, by Stahl and Hoffman,[c] who also recommend it as an efficacious remedy in various other diseases: the former found it not only an astringent, but also a powerful tonic, antispasmodic, and sedative. In proof of the last mentioned quality, we may remark, that in some parts of Sweden it is used in making beer, in order to render it more intoxicating[d]; and Sparrman has observed, that it is employed for this purpose in some parts of Africa. The leaves and flowers of Milfoil are both directed for medicinal use in the Edinburgh Pharm. In the present practice however this plant, we believe, is wholly neglected.

* Vide Lewis's M. M. p. 424. ‖ Vide Stratiotes, *Matthiol. in Dioscorid.*

† Vulneraria insuper habetur sub externo usu, jam ab Achille, ut ferunt, sanatione vulnerum subjectorum sibi militum, auctorato. Murray App. Med. vol. 1. p. 167.

[b] Hæmoptysis, Epistaxis, Menorrhagia, et Hæmorrhois.

[c] Stahl *Diss. de Therap. pass. hypoc.* Hoffman, *De præst. rem.* §. 18.

[d] Vide Linn. *Flor. Suec. p.* 299.

Leontodon Taraxacum

Published by Phillips

LEONTODON TARAXACUM. COMMON DANDELION.

SYNONYMA. Taraxacum. *Pharm. Lond. & Edin.* Dens Leonis, *Raii Syn.* 170. *Ger. em.* 290. *L. Officinalis Wither.* 679. L. Taraxacum. *Huds.* 339. *Smith Flor. Ang.* 822. *Curt.* 1 *t.* 58.

Class Syngenesia. *Order* Polygamia Æqualis. L. *Gen. Plant.* 912.
* *Semiflosculosi Tourn. corollis ligulatis omnibus.*

Ess. Gen. Char. *Recept.* nudum. *Cal.* imbricatus, squamis laxiusculis. *Pappus* plumosus.

Spec. Char. L. T. calyce squamis inferne reflexis, foliis runcinatis denticulatis lævibus.

DANDELION is so very common, that a plot of ground can scarcely be seen where it does not present its yellow flowers*. It is easily distinguished from the hawkweeds and other ligulated plants, by the outer calyces being bent downwards, and by the flower stalk, which is simple, coloured, shining, and unifloral: the leaves are all radical and cut in a peculiar way, forming a good example of what botanists call runcinata. The seeds, in approaching to maturity, become crowned with a fine downy feather, disposed in a spherical shape. The root is perennial and spindle-shaped, which with the whole plant abounds with a milky juice.

The young leaves of this plant in a blanched state have the taste of endive, and make an excellent addition to those plants eaten early in the spring as sallads[a]. At Gottingen the roots are roasted and substituted for coffee by the poorer inhabitants; who find that an infusion prepared in this way can hardly be distinguished from that of the coffee [b] berry.

* It has been observed that these flowers possess a certain degree of sensibility, for when under the powerful influence of the sun in a summer's morning, an evident motion of the flowerets may be discovered. MS Lect. of the late Dr. Hope.

[a] Withering's Bot. Arrang. p. 839. [b] Murray. App. Med. p. 107.

Dandelion is generally considered by medical writers as the most active and efficacious of the lactescent plants; the expressed juice is bitter and somewhat acrid, the root however is still bitterer[c], and possesses more medicinal power than any other part of the plant. Taraxacum has been long in repute as a mild detergent and aperient, and its diuretic effects may be inferred from the vulgar name it bears in most of the European languages, quasi lectiminga et urinaria herba dicitur[d]. Murray says, Viscidos nimirum tenacesque humores stirps solvit, et obstructa vasa reserat, eruptionem variam sanat[e]: and Bergius recommends its use in obstructions of the liver, hypochondriasis, and jaundice. Its successful use in the first of these diseases is confirmed by his own experience[f]. De Haen also gives us another instance of the same complaint cured by the same means; and we have various proofs of the good effects of the Taraxacum related by different authors, in jaundice[g], dropsy[h], pulmonic tubercles[i], and some cutaneous disorders[k].

[c] Haller's Stirp. Hel. n. 58.

[d] ——— plus lotii derivat in vesicam quám pueruli retinendo sunt, præsertim inter dormiendum, eòque tunc imprudentes et inviti stragula permingunt. Ray's Hist. Pl. p. 244. [e] Murray, l. c.

[f] In hepatis morbis, præstantissima est radix hæc recens, sero lactis, jusculis et apozematibus incocta. Præclara identidem inde vidi, ubi alia fefellerunt. Sæpe mihi successit resolvere duritiem hepatis cum jusculo parato e radice recenti. Taraxaci et fol. rec. acetosæ, in sero lactis coctis, vel in aqua, addito vitello ovi, quod jusculum quotidie per plures septimanas, immo menses, sumpserunt ægroti, propinato simul cremore tartari. Hoc regimen exoptata præstitit etiam in calculo felleo et in ascitide. Mat. Med. tom 2. p. 649.

[g] Van Swieten's Com. tom 3. p. 102. and Boerhaave apud Boretium.

[h] Bergius loc. cit. Bonafas in Hautesierckü Recueil d'Observ. tom. 2. p. 360. Fränk. Samml. t. 1. p. 226.

[i] Zimmerman, vide Murray, l. c. Haller, l. c. Park. 780.

[k] Leidenfrost Dissert. de Succis. Herb. rec. p. 27. Frank. Samml. l. c. p. 126. Delius's Diss. de Tarax. aq. taraxaci per fermentationem parata: et in aliis morbis utitur. Feburc Chemie. 2. p. 408.

Arnica montana

Published by Phillips & Fardon April 1st 1806

The leaves, roots, flower stalks, and juice of Dandelion, have all been separately employed for medical purposes, and seem to differ rather in degree of strength than in any essential property: therefore the expressed juice, or a strong decoction of the roots have most commonly been prescribed, from one ounce to four, two or three times a day. The plant should be always used fresh; even extracts prepared from it appear to lose much of their power by keeping[1].

Ingreditur cum radice graminis regiam illam ptisanam, cujus formulam Ludovicus XIV. magno pretio redemit. Haller's Stirp. Hel. No. 56.

[1] Lewis's M. M. 273.

ARNICA MONTANA. MOUNTAIN ARNICA.

SYNONYMA. Arnica, *Pharm. Lon. & Edinb.* Doronicum Austriacum Quartum, *Clus. Pann.* p. 520. Διουξεντικη *Renealme*, p. 118. Doronicum Plantaginis folio alterum, *C. B.* 185. *Tourn. Institut.* 487. Doronicum Germanicum *Park. & Ray.* Doronicum Germanicum foliis semper ex adverso nascentibus villosis, *J. B.* III. 19. Calendula Alpina, *Gerard* 740. Arnica foliis conjugatis, ovatis, integerrimis, *Hal. Stirp. Helv.* No. 90. A. Montana. *Flor. Dan.* 63. *Gartn. Fruct. f.* 451. *Villars. Dauph.* 207.

Class Syngenesia. *Ord.* Polygamia superflua, *L. Gen. Pl.* 958.

Ess. Gen. Char. Recept. nudum. *Pappus* simplex. *Corollulæ* radii filamentis 5 absque antheris.

Sp Ch. A. foliis ovatis integris: caulinis geminis oppositis.

THIS plant is very common upon the northern mountains of Germany and Switzerland, and was first cultivated in this country by

Mr. P. Miller in 1759. [a] The stalk grows above one foot high, erect, roundish, striated, rough, hairy. The radical leaves are oval, narrow at their bases, and more obtusely lanceolated than the cauline leaves. On the stalk they are sessil, entire, oval, obtusely lance-shaped, and stand in pairs: the flowers are large, yellow, radiated, solitary, terminal, appearing in July: the calyx is imbricated, and consists of a single row of narrow, pointed, rough leaflets: the root is perennial, thick, fleshy, and spreading.

The odour of the fresh plant is rather unpleasant, and the taste acrid, herbaceous, and astringent; a watery infusion of it strikes a black colour by the addition of sal martis[b], and the powdered leaves act as a strong sternutatory.

That the Arnica is a medicine of considerable activity there cannot be a doubt; but how far it deserves the extravagant praises it has received at Vienna, is not for us to determine; either the facts stated by Dr. Collin are not admitted by the physicians of this country, or we are disregardful * of a remedy of the first importance in the Materia Medica.

But as our business is to adduce whatever is recorded of each plant by authors of respectability, (whether of Arnica or *Hemlock*) still the medical reader must form his own judgment of the evidence.

The virtues of this plant[c], according to Bergius, are emetica, errhina, diuretica, diaphoretica, emmenagoga, and from its supposed power of attenuating the blood, it has been esteemed so peculiarly efficacious in obviating the bad consequences occasioned by falls and

[a] Hortus Kewensis, vol. 3. p. 226.

[b] Bergius, M. M. 683.

* The author has not been able to procure this plant from any of the London druggists.

[c] There is a variety of this species with narrower leaves, which is more powerfully medicinal. Gmelin Flor. Sibir t. 2. p. 153.

bruises, that it obtained the appellation of panacea lapsorum[d]; and by this resolvent power its success in sundry diseases has been accounted for, particularly pulmonic complaints, suppressio mensium, and visceral obstructions.[e] Of the advantages derived from its use in paralytic and other affections depending upon an interruption or diminution of nervous energy, we have several proofs[f]; and it is observed in these cases, that the recovery is generally preceded by great uneasiness, or acute pain in the parts affected. But it is the extraordinary febrifuge and antiseptic virtue of the Arnica, which have been so highly extolled by Dr. Collin[g].

It had long been a desideratum of his to find an European plant of equal medicinal powers with the Peruvian bark in fevers of the intermitting and putrid kind; and after several fruitless trials of different simples, at last he had the satisfaction to find them in the Arnica; for by the flowers of this plant, made into an electuary[h] with honey, he cured more than one thousand patients labouring under the different species of intermittent fevers in the Pazman hospital, from December 1771, to July 1774; and during the following winter the Doctor made trial of a watery extract of the

[d] Fehrius Eph. N. C. Dec. 1. ann. 9 & 10. Obs. 2. Acta Med. Berolin, Dec. 1. vol. 1. n. 4. vol. 10. p. 80. Dec. 2. vol. 1. p. 66. Buchner, Diss. de genuinis principiis et effectibus Arnicæ. Schulzius, M. M. De La Marche Diss. de Arnicæ veræ usu. Rosenstein. Apot. p. 21. Scopol. Fl. carn. p. 377.

[e] Fehr. loc. cit. Brückner, in Sel, Med. Francof. vol. 3. p. 190. Act. Berol. Dec. 1. vol. 9. p. 24. Quarin, Meth. Med. inflam. p. 80. Act. Berol. Dec. 1. vol. 10. p. 82. l. c. Dec. 2. vol. 4. p. 92 & 94. Nebel in Act. nat. cur. vol. 8. Obs. 113. Vater, Diss. de Ictero.

[f] Bergius m. m. Junker Therap. gen. p. 173. Eschenbach Obs. p. 353. & Dr. Collin, Flor. Arnicæ Vires, mentions twenty-eight cases of paralysis, and nine of amaurosis. Aaskow Societ. Med. Havan. vol. 2. p. 162.

[g] Hen. Jos. Collin, physician to the Pazman hospital, De arnicæ in febribus, & aliis morbis putridis viribus.

[h] R. Pulv. Flor. Arnicæ drach. ix. mellis q. s. bidui spatio absumendum.

flowers, by which he cured thirty quotidians, forty-six tertians, and fifty-eight quartans.*

In putrid fevers the Doctor experienced equal success with the flowers employed in the way of infusion[i], with which many hundreds of patients were snatched from the very jaws of death. However, there are some cases where the Doctor recommends the root[k] in preference to the flowers, believing the former to possess more cordial, tonic, and antiseptic qualities; and it is accordingly directed in those cases where putridity and debility are more prevalent than fever; also in a malignant dysentery Dr. Collin could relate many hundred instances of the superior efficacy of Arnica root, and his practice in this disease was imitated and confirmed by Dr. Dietl[l].

Dr. Collin farther ascertains the medicinal powers which he attributes to this root in thirteen cases of gangrenes, where its antiseptic effects admitted of more evident proof. As the Arnica, when first administered, often excites vomiting, or uneasiness at the stomach, it will be necessary to begin with small doses; but by repeating the medicine two or three times, this uneasiness goes off.

* Dr. Collin is, we believe, the only author who has experienced the good effests of Arnica in intermitting fevers, if we except the two cases stated by Aaskow (l. c.) where it acted as a powerful evacuant. Bergius employed it in quartan intermittents, which were aggravated, rather than bettered, by the use of this medicine. m. m.

[i] R. Flor. arnicæ unc. j. infunde in s. q. aquæ fervidæ per ½ horam, deinde vase clauso per medium ¼ horæ ebulliant; colat. lib. ij. add. syr. capill. vener. q. s. ad gratiam; et omni bihorio diei sumat unc. ij.

[k] R. Pulv. Rad. Arnicæ unc. ij. digere in phiala alta balneo arena adaptata, exacte clausa, per 12 horas cum aq. q. s. colatur unc. xxx. adde syr. alth. unc. iij. m. sumat æger omni bihorio unc. ij. vel iij. And to make this medicine more palatable to the patient, he occasionally added lemon juice, spt. vitriol, or wine.

[l] Physician to the military hospital of invalids, at Vienna.

Published by Phillips & Fardon, April 1st 1806

TUSSILAGO FARFARA. COLTSFOOT.

SYNONYMA. Petasites scapo unifloro, flore radiato, *Hal. Stirp. Helv.* n. 143. Bechium, *Dodon. Pempt.* 586. Tussilago vulgaris. *Bauh. Pin.* 197. *Zannich. Venez.* t. 266. Tussilago. *Clus. Hist.* 140. *Camer. Epit.* 590. *Gerard,* 811. *Parkinson,* 1220. *Raii Hist. Plant,* 259. Tussilago Farfara. *Curtis Flor. Lond. Relhan. Flor. Cantab. Withering.* 719 *Huds.* 364. *Smith.* 878. *En. Bot.* 429. Βηχιον * *Dioscorid. Hippoc. &c.*

Class Syngenesia. *Ord.* Polygamia Superflua. *L. Gen. Pl.* 952.

Ess. Gen. Ch. *Recept.* nudum. *Pappus* simplex. *Cal.* squamæ æquales, discum æquantes, submembranaceæ.

Sp. Char. T. scapo unifloro imbricato, foliis subcordatis angulatis denticulatis.

THE root is long, round, tapering, creeping, and sends off many small short fibres; the stalks are furrowed, downy, simple, six or eight inches high, beset with several scaly leaves, of a brownish pink colour, and closely embracing the stem; the leaves are obtusely heart-shaped, angular, irregularly indented, above of a bright green colour, beneath white, downy, and stand upon long roundish radical footstalks; the flowers are compound, large, and yellow; *the florets in the disc* are hermaphrodite, tubular, the limb is cut into five acute segments, which curl outwardly; the antheræ, by uniting, form a tube, but their apices are separate and pointed; the germen is short, the style filiform, longer than the antheræ, and the stigma is round: the *florets at the circumference* are female,

* Supposed to be derived from βηξ, tussis, hence Tussilago.

tubular at the base, and the limb is long and linear; the germen is oblong; the stigma bifid; the seed is oblong, and of a pale-brown colour, crowned with simple down; the calyx is cylindrical, and the leaflets or squamæ are oblong, pointed, and alternately narrower. It is common in moist clayey places, and the flowers appear some-time before the leaves, in March or April.

The sensible qualities of Tussilago are very inconsiderable; it has a rough mucilaginous taste, but no remarkable smell. The leaves have always been of great fame, as possessing demulcent and pectoral virtues; of course, it is esteemed useful in pulmonary consumptions, coughs, asthmas, and in various catarrhal symptoms.[a] Fuller, in his Medicina Gymnastica,[b] recommends Coltsfoot as a valuable medicine in scrophula; and Dr. Cullen, who does not allow it any powers as a demulcent and expectorant, found it serviceable in some strumous affections.[c] It may be used as tea, or given in the way of infusion, to which liquorice-root or honey, may be a useful addition.

[a] We might, without exception, cite every writer upon the Materia Medica. Percival found it also useful in hectic diarhœas. Essays Med. and Exper. vol. 2. p. 224. Cartheuser advises it to be given with the roots of Dandelion. Mat Med. 416. The juice, liberally drunk, has been beneficial in calculous complaints. Comm. Lit. Nor. 1736, p. 194. [b] p. 84.

[c] Every part of the plant has been medicinally employed for the same purpose, but more usually the leaves, and these are the principal ingredient in the British herb tobacco. It is remarkable, that the smoking of this plant has the recommendation of Dioscorides, Galen, Pliny, Boyle, &c. Et adhuc hodie plebs in suecia instar tabaci contra tussim sugit. Lin. Flor. Suec. p. 289, and under the direction of Pliny it is certainly an efficacious remedy—in singulos haustus, passum gustandum est. lib. 26. c. 6. p. 651.

Anthemis nobilis

Published by Phillips & Fardon, April 2nd 1806.

ANTHEMIS NOBILIS. COMMON CAMOMILE.

SYNONYMA. Chamæmelum. *Pharm. Lond. & Edinb.* *Gerard Emac. p.* 755. *Park. Parad. p.* 289. Chamæmelum nobile seu Leucanthemum odoratius. *Bauh. Pin. p.* 135. Chamæmelum odoratissimum repens, flore simplici. *J. Bauh. Hist. v. iii. p.* 118. *Raii Hist. p.* 353. *Synop. p.* 185. Chamæmelum foliis subhirsutis, nervo duro, pinnis pinnatis, pinnulis lanceolatis incisis. *Hal. Stirp. Helv. n.* 102. Anthemis nobilis. *Hudson, Flor. Ang. With. Bot. Arr. Smith Flor. Lond.* 904.

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 970.

Ess. Gen. Ch. *Recept.* paleaceum. *Pappus* nullus. *Cal.* hemisphæricus, subæqualis. *Flosculi* radii plures quam 5.

Sp. Ch. A. foliis pinnato-compositis linearibus acutis subvillosis.

THE roots are perennial, fibrous, spreading: the stems are slender, round, trailing, hairy, branched, of a pale green colour, and about a foot in length: the leaves are doubly pinnated; the pinnæ are linear, pointed, a little hairy, and divided into three terminal segments: the flowers are compound, radiated, white, at the centre yellow, and stand singly: the calyx is common to all the florets, of an hemispherical form, and composed of several small imbricated scales: the flowers of the *radius* are female, and usually about eighteen, narrow, white, and terminated with three small teeth: the tubular part of the floret encloses the whole of the style, but does not conceal the bifid reflexed stigma: the flowers of the *disc* are numerous, hermaphrodite, tubular, and cut at the brim into five segments: the filaments are five, very short, and have their antheræ united, forming a hollow cylinder: the germen is oblong: the style is short, slender, and furnished with a bifid reflexed stigma: the

seeds are small, and of an irregular shape: the receptacle is supplied with rigid bristle-like paleæ. It grows in most pastures, and flowers in July and August.

The name Camomile is supposed to be expressive of the smell of the plant χαμάιμελον, quoniam odorem mali habeat.[a] It is referred to the ανθεμις of Dioscorides, and to the ανθεμον of Theophrastus. Matricaria Chamomilla, or Corn Feverfew, is similar in its general appearance to the Anthemis nobilis, and is directed for officinal use by most of the foreign pharmacopœias; but the plant which we have here figured has a more fragrant and a more powerful odour, yields more essential oil, and of course is the more efficacious.

A double-flowered variety of Camomile is very common, and usually kept at the shops, but as the odorous and sapid matter chiefly resides in the disc, or tubular part of the florets, the London College therefore judiciously prefer the simple flowers, in which this matter is most abundant.[b]

Both the leaves and flowers of this plant have a strong though not ungrateful smell, and a very bitter nauseous taste, but the latter are the bitterer, and considerably more aromatic. "Camomile flowers give out their virtues both to water and rectified spirit: when the flowers have been dried so as to be pulverable, the infusions prove more grateful than when they are fresh or but moderately dried. Distilled with water, they impregnate the aqueous fluid pretty strongly with their flavour: if the quantity of camomile submitted to the operation is large, a little essential oil[c] separates and rises to the surface of the water, in colour yellow, with a cast of greenish or brown, of a pungent taste, and a strong smell, exactly resembling that of the camomile. Rectified spirit, drawn

[a] *Plin. L.* 22. *c.* 21.

[b] The tubes of the florets appear beset with minute glands, which probably secrete the essential oil.

[c] Baumé obtained from 82 lb. of the flowers 13 drams, and once 18 drams of essential oil. But from a like quantity of the herb, without the flowers, only half a dram of this oil was procured. See *Berg. M. M. p.* 695.

off from the spirituous tincture, brings over likewise a part of the flavour of the camomile, but leaves a considerable part behind in the extract. The smell is in great measure covered or suppressed by the spirit, in all the spirituous preparations; but the taste both in the spirituous tincture and extract, is considerable stronger than in the watery."[d]

These flowers possess the tonic and stomachic qualities usually ascribed to simple bitters, having very little astringency, but a strong odour of the aromatic and penetrating kind, from which they are also judged to be carminative, emmenagogue, and in some measure antispasmodic and anodyne. They have been long successfully employed for the cure of intermittents;[e] as well as of fevers of the irregular nervous kind, accompanied with visceral obstructions, for which we have the authority of Sir John Pringle.[f]

That camomile flowers may be effectually substituted for Peruvian bark in the cure of intermittent fevers, appears from the testimony of several respectable physicians, to which we have referred; and to which we may add that of Dr. Cullen, who says, "I have employed these flowers, and agreeable to the method of Hoffman, by giving several times during the intermission, from half a dram to a dram of the flowers in powder, have cured intermittent fevers. I have found however that the flowers were attended with this inconvenience, that, given in a large quantity, they readily run off by stool, defeating thereby the purpose of preventing the return of paroxysms; and I have found, indeed, that without joining with them an opiate, or an astringent, I could not commonly employ them."[g]

[d] *Lewis, M. M. p.* 221.

[e] Morton, (*Exercit.* 1. *de febr. interm. cap.* 6.) Hoffman, (*Diss. de præstan. rem. dom. p.* 29.) Heister, (*Diss. de Medic. Germ. indig. p.* 13.) found these flowers more effectual in the cure of intermittents than the peruv. bark: and Dr Cullen observes, that his celebrated countryman, Dr. Pitcairn, was of opinion that the powers of Cam. flowers were in this respect equal to the bark.

[f] *Dis. of the Army*, p. 216. [g] *M. M. vol. ii. p.* 79

These flowers have been found useful in hysterical affections, flatulent and spasmodic colics, and dysentery, but from their laxative quality, Dr. Cullen tells us, they proved hurtful in diarrhœas. A simple watery infusion of them is frequently taken, in a tepid state, for the purpose of exciting vomiting or for promoting the operation of emetics. Externally the flowers are used in the decoctum pro fomento, and they are an ingredient in the decoctum pro enemate.

ANTHEMIS PYRETHRUM. SPANISH CAMOMILE, Or, PELLITORY of SPAIN.

SYNONYMA. Pyrethrum. *Pharm. Lond. & Edinb.* Pyrethrum flore bellidis. *Bauh. Pin. p.* 148. Pyrethrum officinarum. *Lob.* 447. *Gerard. Emac. p.* 758. *Park. Theat. p.* 858. *Raii Hist. p.* 353. Chamæmelum specioso flore, radice longa fervida. *Shaw, Afr. p.* 138. Anthemis caulibus simplicibus unifloris decumbentibus. *Mill. Fig. t.* 38. Πύρεθρον *Dioscorid. Lib.* 3. *c.* 85.*

Class Syngenesia. *Ord.* Polygamia Superflua, *Lin. Gen. Plant.* 970.

Ess. Gen. Ch. Recept. paleaceum. *Pappus* nullus. *Cal.* hemisphæricus, subæqualis *Flosculi* radii plures quam 5.

Sp. Ch. A. caulibus simplicibus unifloris decumbentibus, foliis pinnato-multifidis.

THE root is perennial, tapering, long, externally whitish, and sends off several small fibres: the stems are usually simple, round, trailing, bearing one flower, and scarcely a foot in height; but the specimen here figured was extremely luxuriant, and has in some degree departed from its more common and simple appearance:

* Ab igne nomen habet, ob radicis ejus fervorem igneum. *V. Bauh. l. c.*

Anthemis Pyrethrum.

Published by Phillips & Fardon, April 1st 1806.

the leaves are doubly pinnated, segments narrow, nearly linear, and of a pale green colour: the flowers are large, at the disc of a yellow colour, at the radius white on the upper side, on the under side of a purple colour: the different florets answer to the description given of the Anthemis nobilis. It flowers in June and July.

This plant is a native of the Levant and the southern parts of Europe; it was cultivated in England by Lobel in 1570,[a] but it does not ripen its seeds here unless the season proves very warm and dry.[b] The root of Pyrethrum has a very hot pungent taste, without any sensible smell." Its pungency resides in a resinous matter, of the more fixed kiud; being extracted completely by rectified spirit, and only in small part by water; and not being carried off, in evaporation or distillation by either menstruum."[c]

The ancient Romans, we are told, employed this root as a pickle,[d] and indeed it seems less acrid than many other substances now used for this purpose. In its recent state this root is not so pungent as when dried, yet if applied to the skin it is said to act like the bark of mezereon, and in four days produces inflammation of the part.[e]

From the aromatic and stimulating qualities of Pyrethrum there can be no doubt but that it might be found an efficacious remedy, and equally fitted for an internal medicine, as many others of this class now constantly prescribed. Its use however has been long confined to that of a masticatory,[f] for on being chewed, or long retained in the mouth, it excites a glowing heat, stimulates the excretories of saliva, and thereby produces a discharge, which has been found to relieve toothachs, and rheumatic affections of the face; in this way too, it is recommended in lethargic complaints, and paralyses of the tongue.

[a] *Adver. p.* 346. Vide *Hort. Kew.* [b] *Miller Dict.*

[c] *Lewis M. M. p.* 527. [d] See *Berg. M. M. p.* 698.

[e] *Bergius, V. l. c.*

[f] Its use in this way is mentioned by Serenus Samonicus.

" Purgatur cerebrum mansa radice pyrethri."

ARTEMISIA ABROTANUM. COMMON SOUTHERNWOOD.

SYNONYMA. Abrotanum. *Pharm. Lond. & Edinb.* Abrotanum mas angustifolium majus. *Bauh. Pin. p.* 136. *Tourn. Inst. p.* 459. *Duhamel, Arb. i. p.* 20. *t.* 4. Abrotanum mas vulgare. *Park. Theat. p.* 92. Abrotanum mas. *Gerard. Emac. p.* 1105. *Raii Hist. p.* 371. *Dodon. Pempt. p.* 21. Vide *Allion. Ped.* 605. *Krock. Siles. n.* 1364.

* A. caule *erecto.*

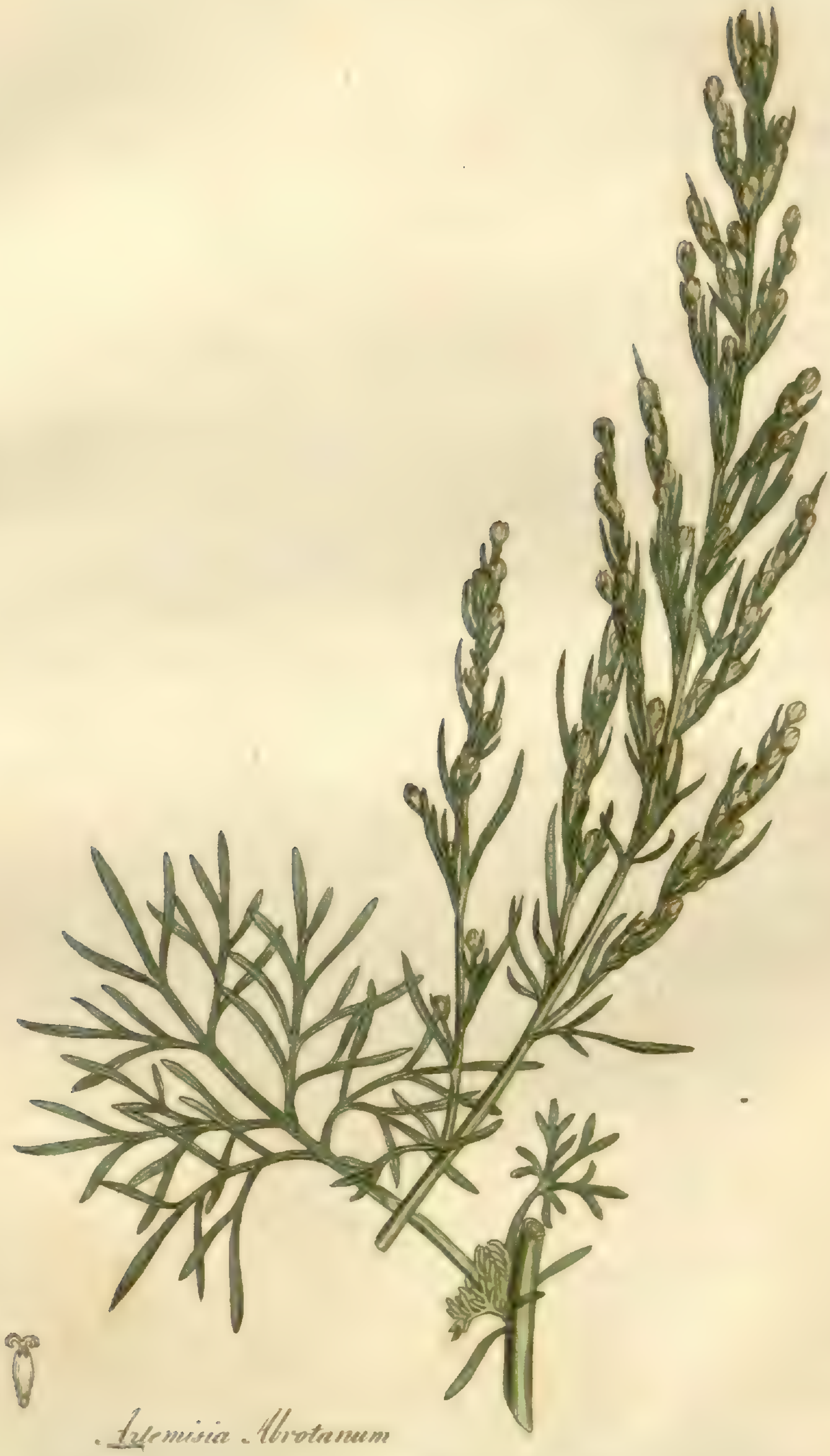
β A. *humilis* foliis setaceis pinnatifidis, caule decumbente suffruticoso. *Mill. Dict.*

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 945.

Ess. Gen. Ch. Recept. subvillosum vel nudiusculum. *Pappus* nullus. *Cal.* imbricatus, squamis rotundatis, conniventibus. *Cor.* radii nullæ.

Sp. Ch. A. fruticosa, foliis setaceis ramosissimis.

THE root is perennial, woody, and fibrous: the stalk is shrubby, round, covered with smooth brown bark, sends off vertical branches, and rises two or three feet in height: the leaves are numerous, somewhat hoary, doubly and irregularly pinnated; pinnæ linear, long, narrow, entire, concave on the upper side, convex beneath, and stand upon long footstalks, which are also of this shape: the flowers are small, of a greenish yellow colour, and placed in close terminal spikes upon the branches: the calyx is imbricated, consisting of several membranous scales: the flowers are compound, composed of numerous florets; those in the *centre*, or *disc*, are *hermaphrodite;* but in the *margin* they are *female:* the corolla is tubular, and extremely minute: the filaments are five, short, and slender: the antheræ are united, and form a hollow cylinder: the



Artemisia Abrotanum

Published by Phillips & Fardon, May 1st 1806.

style is longer than the stamina, and furnished with a cleft reflected stigma: the seeds are naked and solitary.

Southernwood is a native of France, Spain, and Italy: it was cultivated here by Gerard, and its odour renders it so generally acceptable, that there are few gardens in which this plant is not to be found. Although it bears the cold of our winters very well, it so rarely flowers in Britain, that a specimen proper for delineation cannot without difficulty be obtained.

The leaves and tops of Southernwood, have a strong, and to most people an agreeable smell: its taste is pungent, bitter, and somewhat nauseous. These qualities are completely extracted by spirituous menstrua, the herb communicating to the spirit a beautiful green colour. Water extracts its virtues less perfectly, and the infusion is of a light brown colour. In distillation with water this plant affords but a small quantity of essential oil; for from sixteen pounds of the fresh leaves scarcely three drams of this oil could be obtained.[a]

The Abrotanum mas & femina were regarded by the ancients[b] as medicines of considerable efficacy; the latter is referred to Santolina Chamæ-Cyparissus, *Lin.* (Common Lavender Cotton); the former is the species now under consideration, and has been esteemed to be stomachic, carminative, and deobstruent; it is supposed to stimulate the whole system, more particularly that of the uterus. But though it still retains a place both in the London and Edinburgh pharmacopœias, it is now rarely used, unless in the way of fomentation.

[a] Lewis, *M. M. p.* 4.

[b] See Theophrast. *Hist. L.* 1. *c.* 15. *p.* 44. Dioscor. *L.* 3. *c.* 29. *p.* 184. Galen, *Simpl. L.* 6. *p.* 40. Pliny, *L.* 21. *c.* 21.

ARTEMISIA ABSINTHIUM. COMMON WORMWOOD.

SYNONYMA. Absinthium vulgare. *Pharm. Lond. & Edinb.* Absinthium ponticum seu Romanum officinarum, seu Dioscoridis. *Bauh. Pin. p.* 138. Absinthium latifolium sive Ponticum. *Gerard. Emac. p.* 1096. Absinthium vulgare majus. *J. Bauh. Hist. iii. p.* 168. Absinthium vulgare. *Park. Theat. p.* 98. *Raii Hist. p.* 366. *Synop. p.* 188. *Hal. Stirp. Helv. n.* 124. Artemisia Absinthium. *Huds. Ang. p.* 358. *Withering. Bot. Arrang. p.* 891. *Smith.* 864.

Sp. Ch. A. foliis compositis multifidis, floribus subglobosis pendulis: receptaculo villoso.

THE root is perennial, long, and fibrous: the stalks are round, channelled, somewhat downy, ligneous, rising two or three feet in height, and sending off several round branches: the leaves are compound, divided into many bluntish segments in a pinnated order, on the under side downy, of a whitish or pale green colour, and silky softness: the flowers are of a brownish yellow colour, pendent, and placed in numerous spikes, which stand alternately upon the branches: the calyx is composed of many oval scales: the florets are hermaphrodite and male, placed upon a villous receptacle, and in the structure of their different parts nearly resembling those described of the preceding species of Artemisia. This plant is a native of Britain, and grows about rubbish, rocks, and sides of roads.

The leaves of Wormwood have a strong disagreeable smell; their taste is nauseous, and so intensely bitter as to be proverbial. The flowers are more aromatic and less bitter than the leaves, and the roots discover an aromatic warmth without any bitterness.*

* This plant communicates a bitter taste to the flesh and milk of cows and sheep which feed on it. *Lin. Flor. Suec. n.* 735. The milk of a woman, who took the extract, became extremely bitter. *Act. Hafn. vol.* 2. *p.* 165.

Artemisia Absinthium

Published by Phillips & Fardon May 1st 1806.

" The leaves give out nearly the whole of their smell and taste both to aqueous and spirituous menstrua. Rectified spirit elevates little from this plant in distillation: water brings over almost the whole of its smell and flavour. Along with the aqueous fluid there arises an essential oil, which smells strongly and tastes nauseously of the Wormwood, though not bitter. The quantity of oil varies greatly, according to the soil and season in which the herb is produced.[a]

" The watery extract loses the distinguishing smell and ill flavour of the plant, but retains its bitterness almost entire. An extract, made with rectified spirit, contains, along with the bitter, nearly the whole of the nauseous part;[b] water carrying off, in the evaporation, all the oil in which the offensive flavour resides, while pure spirit elevates very little of it."[c]

This species of Wormwood, which is thought by Professor Murray to be the Absinthium ponticum of Dioscorides and Pliny,[d] may be considered the principal of the herbaceous bitters. Its *Virtus*, in the words of Bergius, is antiputredinosa, antacida, anthelminthica, resolvens, tonica, stomachica.[e] And although it is now chiefly employed with a view to the two last mentioned qualities, yet we are told of its good effects in a great variety of diseases, as intermittent fevers,[f] hypochondriasis,[g] obstructions[h] of the liver and spleen,

[a] *Baumé* from twenty-five pounds of the berb obtained six to ten drams of the oil.

[b] The extract, triturated with salt of tartar, emits a volatile odour; and hence appears to contain sal ammoniacum. Sulzer. *Diss. An in plantis sal essentiale ammoniacum? Gott.* 1769.

[c] Lewis, *M. M. p.* 6.

[d] " Absinthium bathypicron herba est vulgo cognita. Præstantius in Ponto & Cappadocia in monte Tauro appellato nascitur." *Dioscor. L.* 3. *c.* 26. *p.* 183.

[e] *Mat. Med. p.* 670. [f] Boerhaave, *Elem. Chem. Processus.* 39. *Comm. Nor.* 1734. *p.* 225.

[g] Haller, *l. c.* [h] Lange, *Brunov. p.* 111.

gout,[i] calculi,[k] scurvy,[l] dropsy,[m] worms, &c. Lindestolphe[n] has asserted, that by a continued use of this herb, great injury is done to the nervous system, from its narcotic and debilitating effects, which he experienced upon himself; observing also, that he could never taste the extract or essence of wormwood without being immediately affected with head-ach and inflammation of the eyes: and it is noticed both by him and his commentator, Stenzelius, that Absinthium produced similar effects upon many others. These narcotic effects of Wormwood have however been attributed to a peculiar idiosyncrasy, as numerous instances have occurred in which this plant produced a contrary effect, though taken daily for the space of six months. Dr. Cullen, speaking on this subject, says, "I have not had an opportunity of making proper experiments; but to me, with Bergius and Gleditsch, the odour of Wormwood seems temulentans, that is, giving some confusion of head: and formerly, when it was a fashion with some people in this country to drink Purl, that is, ale, in which wormwood is infused, it was commonly alleged to be more intoxicating than other ales. This effect is improperly supposed to be owing to its volatile parts: but I am more ready to admit the general doctrine of a narcotic power; and I believe, from several considerations, particularly from the history of the Portland powder, that there is in every bitter, when largely employed, a power of destroying the sensibility and irritability of the nervous power."[o]

Externally Wormwood is used in discutient and antiseptic fomentations. This plant may be taken in powder, but it is more commonly preferred in infusion. The Edinburgh pharmacopœia directs a tincture of the flowers, which is, in the opinion of Dr. Cullen, a light and agreeable bitter, and at the same time a strong impregnation of the Wormwood.

[i] Haller, *l. c.* Bomare, *Dict.* [k] Linnæus, *Am. Acad. T.* 3. *p.* 160.

[l] Eugal. *De Scorb. p.* 83. [m] Fehr, *Hiera. picra, vel de Absinth. analecta. p.* 117. Heister *in* Hall. *Disput. anat. vol.* 6. *p.* 713. *Misc. Nat. Cur. Dec.* 1. *Ann.* 3. *Obs.* 322. [n] *De venenis. p.* 547. [o] *Mat med. vol.* 2. *p.* 81.

. Artemisia vulgaris

Published by Phillips & Sarsden, Mar. 1st 1806

ARTEMISIA VULGARIS. MUG-WORT.

SYNONYMA. Artemisia.† *Pharm. Edinb.* Artemisia vulgaris major. *Bauh. Pin.* p. 137. Artemisia mater herbarum. *Gerard. Emac.* p. 1103. Artemisia foliis pinnatis inferne tomentosis, pinnis acute dentatis, spica paniculata erecta. *Hal. Stirp. Helv. n.* 130. Artemisia vulgaris. *J. Bauh. Hist. iii.* p. 184. *Park. Theat.* p. 90. *Raii. Hist.* p. 372. *Synop.* p. 190. *Huds. Flor. Ang.* p. 359. *Withering Bot. Arrang.* p. 891. *Smith Flor. Brit.* 865.

Sp. Ch. A. foliis pinnatifidis planis incisis subtus tomentosis, racemis simplicibus recurvatis, floribus radio quinquefloro.

THE root is perennial, composed of numerous strong fibres: the stalk is erect, branched, angular, striated, reddish, and usually rises two or three feet in height: the leaves are irregularly and deeply divided into several laciniæ or lobes, which are oval, pointed, on the upper side of a deep green colour, on the under downy, or covered with a cotton-like substance: the flowers are small, purplish, and produced in spikes, which stand alternately, and rise from the bottom of the leaves: the calyx is composed of several narrow scales, which are purplish, woolly, and placed in an imbricated order: the florets are longer than the calyx, stand upon a naked receptacle, and appear in August: the five florets of the circumference are female; those of the centre are hermaphrodite, and both agree in their structure with those of the other species already described.

Mugwort is a native of Britain, and is commonly found growing in waste grounds, and the borders of fields. It is divided into red

† "Artemisia dicta, ab *Artemisia Mausoli Cariæ regis uxore*, quæ hanc sibi, ut loquitur *Plinius l.* 25. *c.* 7. *p.* 636. adoptavit, cum antea παρθενις i. e. virginalis, quod virgo dea illi nomen dederit, vocaretur. Sunt qui ab *Artemide Ilithia* cognominatam putent; quoniam privatim fœminarum malis, quibus Αρτεμις i. e. *Diana* præest, medeatur." *C. Bauh. l. c.*

and white varieties; the former is distinguished by a reddish tinge of the stalk and flowers; in those of the latter they are of a pale green. "The leaves have a light agreeable smell, especially when rubbed a little; but scarcely any other than an herbaceous taste. An extract made from them by water is likewise almost insipid; and an extract made by spirit has only a weak aromatic bitterness. Baierus informs us, in a dissertation on this plant, that by fermenting a large quantity of it, and afterwards distilling, and cohobating the distilled water, a fragrant sapid liquor was obtained, with a thin fragrant oil on the surface. The flowery tops are considerably stronger than the leaves, and hence should seem to be preferable for medicinal use."[a]

This plant, though rarely used at present, was by the ancients held in great estimation. Hippocrates[b] very frequently mentions Artemisia: he thought it of great use in promoting uterine evacuations: with this intention it was also employed by Dioscorides;[c] and Galen for this purpose used it in the way of fomentation; a practice which seems in some measure conformable to that of the Chinese women, who, as we are told,[d] make a poultice of the leaves of this plant, mixed with rice and sugar, which in cases of amenorrhœa, and hysteria, instar bellarii ingerunt. If this herb however possesses any powers as an antihysteric or uterine, they are very weak; the London College has therefore properly expunged it from the materia medica.

Moxa is a substance prepared in Japan from the dryed tops and leaves of Mugwort,[e] by beating and rubbing them between the hands till only the fine internal lanuginous fibres remain, which are

[a] *Lewis, M. M. p.* 117. [b] *De Morb. Mul. lib.* 1.

[c] *Mat. Med. lib.* 3. *cap.* 10. [d] *Ten. Rhyne de Arthr. p.* 133.

[e] This however is not the species of Artemisia from which the eastern Moxa is made, but that prepared from this plant in Germany was found to answer very well. See *Eph. Nat. Cur. Dec.* 3. *A.* 7. 8. *App.* 141.

It has also been made from the down of Verbascum.

then combed and formed into little cones. These, used as cauteries, are greatly celebrated in eastern countries for preventing and curing many disorders;[f] but chronic rheumatisms, gouty, and some other painful affections of the joints, seem to be the chief complaints for which they can be rationally employed. The manner of applying the Moxa is very simple: the part affected being previously moistened, a cone of the Moxa is laid, which being set on fire at the apex, gradually burns down to the skin, where it produces a dark-coloured spot: by repeating the process several times, an eschar is formed of any desired extent, and this on separation leaves an ulcer, which is kept open or healed up as circumstances may require.

It is said that the use of the Moxa was originally introduced by the Jesuits;[g] but it is probably of greater antiquity. From remote times it has been the practice to cauterize the affected parts by various means. Hippocrates for this purpose not only used iron but flax, also a species of Fungus;[h] and the Laplanders still prefer the Agaric, (Boletus igniarius) which they prepare and use in a similar way, as the Japanese do their Moxa.[i] The Egyptians produced the same effects by means of cotton or linen cloth;[k] and in Spain a Moxa is prepared from a species of the Echinops.

[f] For a full account of these see Kæmpfer *Amæn. exot. p.* 502, *&c.* Also Abbé Grosier *(Hist. of China)* from whom it appears, that mirrors of ice or metal were used for the purpose of igniting the moxa; and that the ancient Chinese made paper, and a kind of cloth, of the down of artemisia.

[g] See *Recueil d'observations curieuses, tom. ii. p.* 114.

[h] *Lib. de affect.* §. 30.

[i] Harmens and Fiellstrom *Diss. Med. Lapp. in Hall. Collect. diss. pract. tom. vi. p.* 728.

[k] Prosper Alpinus, *Lib. iii. c.* 12. *p.* 209.

ARTEMISIA MARITIMA. SEA WORMWOOD.

SYNONYMA. Absinthium maritimum. *Pharm. Lond.* Absinthium seriphium Belgicum. *Bauh. Pin. p.* 139. *J. Bauh. Hist. iii. p.* 188. Absinthium seriphium sive marinum Anglicum. *Park. Theat. p.* 102. Absinthium marinum album. *Gerard. Emac. p.* 1099. *Raii Hist. p.* 370. *Synop. p.* 189. *Huds. Flor. Ang. p* 359. *Withering Bot. Arrang. p.* 890. *Smith. Flor. Brit.* 864.

Sp. Ch. A. foliis multipartitis tomentosis racemis cernuis flosculis femineis ternis.

THE root is perennial, spreading, and fibrous: the stems are procumbent, branched, about a foot in height, and covered with a white down or cotton: the leaves are numerous, irregularly divided into many segments, which are narrow, linear, and covered both above and below with a fine cotton-like substance, giving the whole plant a whitish appearance: the flowers are of a brownish yellow colour, and placed in pendent spikes: the calyx is composed of many roundish scales: three florets at the circumference are female, the others are hermaphrodite, and both in their structure resemble those of absinthium. It is a native of Britain, growing plentifully on the sea shore, and about salt marshes, and flowers in August and September.

This plant seems to have been formerly confounded with the A. pontica, or Roman Wormwood, as appears by Ray[a] and Dale;[b] their specific differences however are very evident. Its taste and smell

"[a] Absinthii speciem Londini & alibi in Anglia coli solitam nomine Absinthii Romani, non aliter ab hoc differre putamus quam culturà & loco natali." &c. *Hist. p.* 370.

[b] Speaking of this plant, he says, "Mulierculæ Botanopolæ Londinenses Absinthium romanum vocant." *Pharm. p.* 99.

Artemisia maritima

Published by Phillips & Fardon

Artemisia Santonica

Published by Phillips & Fordon, May 1st 1806.

are considerably less unpleasant[c] than those of the common Wormwood; and even the essential oil, which contains the whole of its flavour concentrated, is somewhat less ungrateful, and the watery extract somewhat less bitter, than those of the common wormwood. Hence it is preferred by the London College in those cases where the A. Absinthium is supposed to be too offensive to the stomach.[‡] But as the efficacy of these plants depends upon their sensible qualities, this species, though its virtues approach to those of common wormwood, yet from being less powerfully bitter, must be considered in a proportionate degree a less powerful medicine.

A conserve of the tops of this plant is directed by the London Pharmacopœia.

[c] "In its wild state it smells like Marum or Camphor, but in our gardens it is less grateful." *Withering, l. c.*

The salt of Wormwood, which is obtained from the ashes of the A. Absinthium, differs not from other vegetable fixed alkali, provided they be equally pure.

‡ It appears by Dioscorides, that the ancients believed it to disorder the stomach: "Absinthium marinum, quidam σεριφιον vocant, est herba prætenuibus surculis abrotoni parvi similitudine, minutulis referta seminibus, subamara *stomacho inimica* graveolens, & cum quadam calefactione astringens." *l. 3. c. 27.*

ARTEMISIA SANTONICA. TARTARIAN SOUTHERNWOOD.

SYNONYMA. Santonicum. *Pharm. Lond. & Edinb.* Absinthium Santonicum Alexandrinum. *Bauh. Pin. p.* 139. *Raii Hist. p.* 368. Sementina. *Gerard Emac. p.* 1100. Semen sanctum. *Lob. ic.* 758. Absinthium Seriphium Ægyptium & semen sanctum, Scheba Arabum. *Camer. Epit. p.* 457. Absinthium Santonicum alexandrinum, sive sementina & semen sanctum. *Park. Theat. p.* 102. Artemisia fruticosa incana ramosissima, corymbis sessilibus spicatis subrotundis, foliis superioribus linearibus brevissimis obtusiusculis. *Gmel. Lib.* 11. *p.* 115. *t.* 51.

Sp. Ch. A. foliis caulinis linearibus pinnato-multifidis, ramis indivisis, spicis secundis reflexis, floribus quinquefloris.

THE root is perennial: the stem is round, smooth, branched, somewhat hoary, and rises about two feet in height: the lower leaves are divided into many narrow linear segments, standing in a pinnated order; those of the branches are sessile, narrow, and undivided; they are all of a pale green on the upper side, and whitish beneath: the flowers are roundish, brown, and placed in spikes upon short slender alternate peduncles: the calyx is composed of numerous narrow scales: the florets are male and female, placed upon a naked receptacle, and in their situation and structure agree with the other species of Artemisia already described. It is a native of Siberia, and flowers in September.

This species, which was first cultivated in England by Mr. P. Miller,[a] we obtained at the Royal Garden at Kew; but whether it is the officinal Santonicum, or not, seems very doubtful.*

It appears by the species plantarum, that though Linnæus first considered this plant to be the Santonicum, afterwards however he changed his opinion, and referred it to another species, named Artemisia judaica;[b] and in this he has been followed by Murray and Bergius; but as the evidence upon which this determination is founded, is admitted by Linnæus himself to be still inconclusive,[c] we have in conformity to the London College adopted the Artemisia originally referred to.

[a] See *Aiton's Hort. Kew.*

* The following observation of Geoffroy on this subject is still, in some measure, applicable:—"Nulla quidem res in officinis magis usitata & cujus origo minus cognita sit. Num in Gallia proveniat, in Palæstina, in Ægypto, vel in Persia, aut in solo regno, *Boutan*, in India orientali remotissima." *M. M. vol. ii. p.* 466.

[b] *Mantissa, p.* 111. *& p.* 281. And *Mat. Med.* second Edition.

[c] He enumerates the seeds of this plan among those of the other plants hitherto not sufficiently ascertained. See his *Preface* to the *Materia Medica.*

The seed of Santonicum or Wormseed is small, light, oval, composed as it were of a number of thin membranous coats, of a yellowish green colour, with a cast of brown; easily friable on being rubbed between the fingers, into a fine chaffy kind of substance.

These seeds are brought from the Levant;[d] they have a moderately strong and not agreeable smell, somewhat of the wormwood kind; and a very bitter subacrid taste. Their virtues are extracted both by watery and spirituous menstrua.

These seeds, in common with the other Artemisias, are esteemed to be stomachic, emmenagogue,[e] and anthelmintic; but it is especially for the last mentioned powers that they have been generally administered; and from their efficacy in this way they obtained the name of Wormseed. Their quality of destroying worms has been ascribed solely to their bitterness; but it appears from Baglivi, that worms (lumbrici) immersed in a strong infusion of these seeds, were killed in five, and according to Redi, in seven or eight hours,[f] while in the infusion of Wormwood, and in that of Agaric the worms continued to live more than thirty hours; and hence it has been inferred that their vermifuge effects could not wholly depend upon the bitterness of this seed. To adults the dose in substance is from one to two drams twice a day. Lewis thinks that the spirituous extract is the most eligible preparation of the Santonicum for the purposes of an anthelmintic.

[d] *Lewis, M. M. p.* 580.

[e] Remarkable effects of the Santonicum in this way are related by Bergius:—"Puellæ cuidem decenni, vermibus conflictanti, semina Santonici exhibui, sed per illud tempus quo iis utebatur, menses fluxerunt, qua re cognita, usum eorundem dissuasi, unde etiam fluxus sponte cessavit." *M. M. p.* 668.

[f] *Bagliv. Oper. p.* 60. *Redi de animal. viv. p.* 159.

INULA HELENIUM. COMMON INULA, Or, ELECAMPANE.

SYNONYMA. Enula Campana. *Pharm. Lond.*. Helenium. *Gerard Emac. p.* 793. *Raii Hist. p.* 273. *Synop. p.* 176. Helenium vulgare. *Bauh Pin. p.* 276. Helenium sive Enula campana. *J. Bauh. Hist. iii. p.* 108. *Park. Theat. p.* 654. Aster foliis ovato-lanceolatis, serratis, subtus tomentosis, calycinis ovato-lanceolatis, maximis. *Hal. Stirp. Helv. n.* 72. Inula Helenium. *Hudson Flor. Ang. p.* 368. *With. Bot. Arr. p.* 922. *Flor. Dan.* 728. *Smith Flor. Brit.* 890. *Flor. Dan.* 728.

Class. Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 956.

Ess. Gen. Ch. *Recept. nudum.* *Pappus* simplex. *Antheræ* basi in setas duas desinentes.

Sp. Ch. T. foliis amplexicaulibus ovatis rugosis subtus tomentosis, calycum squamis ovatis.

THE root is perennial, large, thick, branched, externally brown or grey, internally whitish: the stalk is upright, strong, round, striated, branched, beset with soft hairs, and rises three or four feet in height: the leaves are large, ovate, serrated, crouded with reticular veins, supplied with a strong fleshy midrib, on the upper pagina smooth, on the under downy: the leaves, which are placed on the upper part of the stem are sessile, and surround the branches, but those towards the bottom stand upon footstalks: the flowers are large, yellow, of the compound kind, and terminate the stem and branches: the calyx is composed of several rows of strong imbricated ovate segments: the corolla consists of numerous florets, which are of two kinds; those occupying the *centre* are of a regular tubular form, divided at the brim into five small segments, and are *hermaphrodite*, each containing five short filaments, which have their

Inula Helenium

Published by Phillips & Fardon, June 1st 1806.

antheræ united so as to form a hollow cylinder and a long germen, which supports a slender style, about the length of the tube, and furnished with a bifid stigma: the florets at the *circumference* are *female,* and at the lower part tubular, but at the upper ligulated or strap-shaped, and cut at the extremity into three narrow pointed teeth; the female part is similar to that in the hermaphrodite florets: the seeds are solitary, striated, quadrangular, and furnished with a simple feather or pappus: the receptacle is naked and flat. It is a native of England, growing in moist meadows, and flowers in July and August.

It is probable, that Elecampane is the Helenium foliis verbasci of Dioscorides,[a] and the Inula of Pliny,[b] who also mentions Helenium but as a very different plant.[c] Elecampane is seldom to be met with in its wild state, but it is commonly cultivated in gardens, from whence the shops are supplied with the root, which is the part directed for medicinal use. " This root, in its recent state, has a weaker and less grateful smell than when thoroughly dried and kept for a length of time, by which it is greatly improved, its odour then approaching to that of Florence orris. Its taste, on first being chewed, is glutinous and somewhat rancid, quickly succeeded by an aromatic bitterness and pungency. Spirituous liquors extract its virtues in greater perfection than watery; the former scarce elevate any thing in distillation; with the latter an essential oil arises, which concretes into white flakes: this possesses at first the flavour of the Elecampane, but generally loses it on keeping. An extract, made

[a] *Lib. i. cap.* 27. [b] *Lib. xix. cap.* 5

[c] " Helenium e lacrymis Helenæ natum, & ideo in Helena insula laudatissimum. Est autem frutex humi se spargens dodrantalibus ramulis, folio simili serpyllo." *Lib. xix. c.* 9.

The Inula is noticed by Horace:

" Erucas virides, inulas ego primus amaras
Monstravi incoquere." Sat. 8. v. 51.

——— quum rapula plenus
Atque acidas mavult inulas. Sat. 2. v. 44.

with water, possesses the bitterness and pungency of the root, but in a less degree than that made with spirit."

The high opinion entertained by the ancients of the virtues of Elecampane may be collected from the words of Schröder, who says, "Abstergit, discutit, aperit, pulmonica est. Stomachica, alexipharmaca, sudorifera, &c. *Usus præcip.* in tartaro pulmonum renumque attenuando, ac educendo, & hinc in tussi, asthmate, in cruditatibus ventriculi emendandis, ureteribus reserandis, in peste, contagiosisque morbis arcendis, in scabie."[d] Bergius also ascribes many virtues to this root, and from its sensible and chemical qualities it promises to be a medicine of some efficacy; but in the diseases in which it is principally recommended, as dyspepsia, pulmonary affections, and uterine obstructions, we have no satisfactory evidence of its medicinal powers.[e] One dram of this root in infusion, and from two drams to half an ounce in decoction, is said to be the dose usually given.

[d] P. 602. See *Alston's M. M. vol i. p.* 454.

[e] See Cullen's *M. M. vol. ii. p.* 459.

TANACETUM VULGARE. COMMON TANSY.

SYNONYMA. Tanacetum. *Pharm. Lond. & Edinb. Raii Hist. p.* 365. *Synop. p.* 188. *Gerard Emac. p.* 650. Tanacetum vulgare luteum. *Bauh. Pin. p.* 132. Tanacetum vulgare. *Park. Theat. p.* 80. *Hudson Fl. Ang. p.* 357. *Withering. Bot. Arrang. p.* 887. *Flor. Dan. p.* 871. *Smith.* 862. Tanacetum foliis pinnatis, pinnis semipinnatis, acute dentatis. *Hal. Stirp. Helv. n.* 132.

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 944.

Ess. Gen. Ch. *Recept.* nudum *Pappus* submarginatus. *Cal.* imbricatus, hemisphæricus. *Cor.* radii obsoletæ, 3-fidæ.

Sp. Ch. T. foliis bipinnatis incisis serratis.

Tanacetum vulgare.

Published by Phillips & Fardon June 1st 1806

THE root is perennial, long, creeping, and fibrous: the stem is strong, erect, often reddish, branched towards the top, smooth, beset with leaves, and rises two or three feet in height: the leaves are doubly pinnated; lesser pinnæ, numerous, notched, or deeply serrated; principal ribs edged with leafy clefts: the flowers are yellow, compound, and produced in a corymbus: the calyx consists of numerous small imbricated squamæ, forming a common perianthum of an hemispherical shape: *the florets at the disc are hermaphrodite,* tubular, divided at the mouth into five pointed segments: *the florets at the border are female,* and cut at the brim into three teeth: the filaments are five, very short, slender, and furnished with antheræ, which unite and form a hollow cylinder: the germen in both the hermaphrodite and female florets is oblong, small, and supports a filiform style, furnished with a cloven reflexed stigma: the seeds are naked, solitary, and of an oblong shape: the receptacle is convex and naked. It is a native of England, growing in moist pastures, borders of corn fields, roads, and rivers, and flowering in July and August.

This species, of which there is a variety, *foliis crispis,* the curled Tansy, which is said to be more grateful to the stomach than the common Tansy, and has therefore been preferred by some for medical purposes; but as the sensible qualities of the latter seem most powerful, we judge it to be most efficacious.

" The leaves and flowers of Tansy have a strong, not very disagreeable smell, and a bitter somewhat aromatic taste: the flowers are stronger though rather less unpleasant than the leaves. They give out their virtue both to water and spirit, most perfectly to the latter: the tincture made from the leaves is of a fine green; from the flowers of a bright pale yellow colour. Distilled with water they yield a greenish-yellow essential oil, smelling strongly of the herb: the remaining decoction, inspissated, affords a strong bitter subsaline extract. The spirituous tinctures give over also, in distillation, a considerable part of their flavour; a part of it remaining along with the bitter matter, in the extract."[b]

[b] Lewis, *M. M. p.* 633.

According to Bergius, the virtues of Tansy are tonic, stomachic, anthelmintic, emmenagogue, and resolvent;[c] qualities usually attributed to bitters of the warm or aromatic kind; many of which we have had occasion to notice under the genus Artemisia, which is closely allied to that of Tanacetum in its botanical character. Tansy has been much used as a vermifuge, and testimonies of its efficacy are given by many respectable physicians:[d] not only the leaves but the seeds have been employed with this intention, and substituted for those of Santonicum.[e]

We are told by Dr. Clark, that in Scotland Tansy was found to be of great service in various cases of gout;[f] and Dr. Cullen, who afterwards was informed of the effects it produced upon those who had used the herb for this purpose, says, "I have known several who have taken it without any advantage, and some others who reported that they had been relieved from the frequency of their gout."[g]

Tansy is also recommended in the hysteria, especially when this disease is supposed to proceed from menstrual obstructions.

This plant may be given in powder to the quantity of a dram, or more, for a dose; but it has been more commonly taken in infusion, or drunk as tea.

[c] *Mat. Med. p.* 664.

[d] Hoffman speaks highly of its efficacy. See *Med. Syst. T.* 4. *P.* 2. *p.* 333. See also *Supp. p.* 87. Rosenstein, *Bskd.* cap. de vermibus. [e] The latter however are much more bitter and aromatic. See *Lewis, l. c.* [f] Vide, *Essays and Obs. physical and lit. vol. iii. p.* 438. [g] *Mat. Med. vol. ii. p.* 80.

Cynara Scolymus

Published by Phillips & Fardon, June 1st 1806

CYNARA SCOLYMUS. COMMON ARTICHOKE.

SYNONYMA. Cinara. *Pharm. Lond. & Edinb.* Cinara hortensis foliis non aculeatis. *Bauh. Pin. p.* 383. Cinara maxima alba. *Gerard. Emac. p.* 1153. Cinara sativa alba. *Park. Parad. p.* 519. Carduus sive Scolymus sativus non spinosus. *J. Bauh. Hist. vol. iii. p.* 48. *Raii Hist. p.* 299.

α Cinara hortensis aculeata. C. B. *French Artichoke.*

β C. hortensis foliis non aculeatis. C. B. *Globe Artichoke.*

Class Syngenesia. *Ord.* Polygamia Æqualis. *Lin. Gen. Plant.* 928.

Ess. Gen. Ch. *Cal.* dilatatus, imbricatus squamis carnosis, emarginatis cum acumine.

Sp. Ch. C. foliis subspinosis pinnatis indivisisque, calycinis squamis ovatis.

THE root is perennial, large, and fibrous: the stem is thick, strong, branched, striated, and rises about three feet in height: the leaves are large, of an irregular shape, pinnatifid, obtuse, bent downwards, and stand upon strong scored footstalks; on the upper side they are smooth and veined, and on the under reticulated, hoary, and downy: the flowers terminate the stem and branches upon thick fleshy peduncles: the common calyx is globular, three or four inches in diameter, and composed of numerous ovate scales, which at the base are thick and fleshy, at the apex tough, membranous, shining, notched, but with a spinous point in the centre: the florets of the corolla are numerous, blue, and equal in size, each consisting of one leaf, which is funnel-shaped, and at the base forms a slender tube; at the limb it is erect, and divided into five segments; five filaments, which are capillary, very short, and furnished with antheræ, which form a cylindrical tube of the length

of the corolla, and five toothed: a germen of an ovate form, which supports a slender style, longer than the stamina, and terminated by a simple, oblong, notched stigma: the seeds are oblong, obscurely quadrangular, and furnished with a long sessile feathery pappus: the receptacle is bristly. It flowers in August and September.

The Artichoke is a native of the southern parts of Europe. It was cultivated here by Turner;[a] and as a culinary article it is common in most kitchen gardens.

The receptacles, or bottoms of the heads, and the fleshy part of the scales are usually eaten, and though thought by Galen to generate bile and melancholy, are wholesome and nutritious. The Arabians noticed their diuretic qualities, and therefore deemed them useful to carry off morbid matter by the kidneys.[b]

The leaves are bitter, and afford by expression a considerable quantity of juice, which when strained and mixed with an equal part of white wine, has been given successfully in dropsies;[c] for this purpose two or three spoonfuls of the mixture are to be taken night and morning. An infusion of the leaves are likewise diuretic, and may be employed with the same intention.

[a] Antecedent to the year 1551.

[b] See *Sebizius de Aliment. facult. p.* 346.

[c] Vide *Journal etranger.* and Aaskow in *Act. Soc. Med. Havniens. vol. i. p.* 201.

CICHORIUM INTYBUS. WILD, or BLUE SUCCORY.

SYNONYMA. Cichoreum. *Pharm. Geoff. iii.* 319. *Dale.* 84. *Alston. i.* 412. *Lewis.* 227. *Edinb. New Disp.* 171. *Murray. i.* 100. *Bergius.* 650. Cichorium sylvestre, sive officinarum. *Bauh. Pin.* 126. *Gerard. Emac.* 284. *Park. Theat.* 776. *Ray. Hist.* 255. C. Intybus. *Hudson Flor. Ang.* 348. *Withering. Bot. Arr.* 862. *Curt. Flor. Lond.* 241. *Smith. Flor. Brit.* 843. *Flor. Dan.* 150.

Cichorium Intybus

Published by Phillips & Fardon, June 1st 1806.

Class Syngenesia Polygamia Æqualis. *Lin. Gen. Plant.* 921.

Gen. Ch. *Receptaculum* subpaleaceum. *Cal.* calyculatus.
Pappus sub-5-dentatus, obsolete pilosus.

Sp. Ch. C. floribus geminis sessilibus, foliis runcinatis.

ROOT perennial, long, tapering, branched, or spindle-shaped; externally yellowish, internally white, lactescent. Stalk erect, rough, branched, angular, from one to two or even three feet in height. Leaves at the root numerous, pinnatifid, or cut into irregular segments like those of dandelion: on the stalk they are alternate, sessile, somewhat spear-shaped, but indented and rough at the base. Flowers compound, large, blue, commonly in pairs. Calyx common to all the florets, composed of a double set of leaves, of which the outer are in number five, ovate, spreading, and fringed with glandular hairs; the inner set consists of about eight. Corolla composed of hermaphrodite florets, which are regular, blue, and about twenty in number, each consisting of a short white tube, from which arises a long flat ribbed limb, divided at the extremity into five teeth. Filaments white, slender, unconnected. Antheræ blue, forming a hollow angular cylinder. Germen conical, crowned with short hairs. Style filiform. Stigmata two, rolled back, blue. Seeds numerous, naked, angular, lodged at the bottom of the calyx.

It commonly grows about the borders of corn fields, and flowers in July and August.

This plant belongs to the same family with the garden endive, and by some botanists has been supposed to be the same plant in its uncultivated state; but the endive commonly used as sallad is an annual, or at most a biennial plant, and its parent is now known to be the Cichorium Endivia.

It appears from Horace and others,[a] that the Cichorea was com-

[a] ——— ——— Me pascant olivæ
Me cichorea, levesque malvæ. *Hor. Od.* 31.

"Cichorea, & teneris frondens lactucula fibris." *Juvenal.*

monly eaten by the Romans; and according to Pliny[b] this name signified the wild species of the plant. The Intybus and Seris are also mentioned as its congeners, the latter implying the cultivated species.

Wild Succory, or Cichory, as it has been called, "abounds with a milky juice, of a penetrating bitterish taste, and of no remarkable smell, or particular flavour: the roots are bitterer than the leaves or stalks, and these much more so than the flowers."

By culture in gardens, and blanching, it loses its bitterness, and may be eaten early in the spring in sallads. The roots, if gathered before the stems shoot up, are also eatable, and when dried may be made into bread.[c]

The roots and leaves of this plant are stated by Lewis to be "very useful aperients, acting mildly and without irritation, tending rather to abate than to increase heat, and which may therefore be given with safety in hectic and inflammatory cases. Taken freely, they keep the belly open, or produce a gentle diarrhæa; and when thus continued for some time, they have often proved salutary in beginning obstructions of the viscera, in jaundices, cachexies, hypochondriacal and other chronical disorders."[d]

A decoction of this herb, with others of the like kind, in whey, and rendered purgative by a suitable addition of polychrest salt, was found an useful remedy in cases of biliary calculi,[e] and promises advantage in many complaints requiring what have been termed attenuants and resolvents. The virtues of Succory, like those of dandelion, reside in its milky juice; and in most of the plants of the order Semiflosculosæ, a juice of a similar nature is to be found; therefore what has been before observed of the effects of taraxacum, will, in a great measure, apply to the Cichorium; and we are warranted in saying, that the expressed juice of both these plants,

[b] *Lib. xx. c. 8.*

[c] *Withering. l. c.*

[d] *Lewis l. c.*

[e] Van Swieten. *Cemment. T. iii. p. 137.*

Matricaria Parthenium

Published by Phillips, & Fardon, June 1st 1806.

taken in large doses, frequently repeated, has been found an efficacious remedy in phthisis pulmonalis, as well as in the various other affections above mentioned.

The seeds of the Cichorium, which are small, angular, and of a brown colour, are reckoned among the *four smaller cooling seeds.*

MATRICARIA PARTHENIUM. COMMON FEVERFEW.

SYNONYMA. Matricaria. *Pharm. Geoff. iii.* 825. *Dale.* 97. *Alston. ii.* 175. *Lewis.* 414. *Ed. New. Dispens.* 227. *Murray. i.* 148. *Bergius.* 687. *Cullen. ii.* 364. Matricaria vulgaris sive sativa. *Bauh. Pin.* 133. *Gerard. Emac.* 652. *Park. Theat.* 83. *Ray. Hist.* 357. *Synop.* 187. *Hall. Hist. Stirp. Helv. n.* 100. M. Parthenium. *Huds. Flor. Ang.* 371. *Withering. Bot. Arr.* 931. *Ic. Flor. Dan.* 192. Pyrethrum Parthenium. *Smith Flor. Brit.* 900.

Syngenesia. Polygamia Superflua. *Lin. Gen. Plant.* 967.

Gen. Ch. Recept. nudum. *Pappus nullus. Cal.* hemisphæricus, imbricatus: marginalibus solidis, acutiusculis.

Sp. Ch. M. foliis compositis planis: foliolis ovatis incisis, pedunculis ramosis.

ROOT perennial, composed of numerous long fibres. Stalk erect, firm, much branched, striated, round, smooth, rising above two feet in height. Leaves alternate, hairy, pinnated; lobes irregular, toothed, blunt; terminal lobe bifid. Flowers large, compound, at the centre yellow, at the radius white, upon long peduncles, forming a kind of umbel. Calyx common to all the florets, hemispherical, and composed of numerous ovate squamæ, which are membranous at the border. Florets at the radius, female, oblong, about two lines in breadth, terminated by three small teeth. Stigma

bifid, turned in opposite directions. Florets of the disk numerous, tubular, hermaphrodite, five-toothed. Filaments five, capillary, very short. Antheræ forming a hollow cylinder. Seeds egg-shaped, truncated at the base, furrowed, whitish, without pappus.

It is common about hedges, walls, and waste grounds, flowering in June and July.

"The leaves and flowers of Feverfew have a strong not agreeable smell, and a moderately bitter taste, both which they communicate, by warm infusion, to water and rectified spirit. The watery infusions, inspissated, leave an extract of considerable bitterness, and which discovers also a saline matter both to the taste and in a more sensible manner by throwing up to the surface small crystalline efflorescences in keeping: the peculiar flavour of the Matricaria exhales in the evaporation, and impregnates the distilled water, on which also a quantity of essential oil is found floating. The quantity of spirituous extract, according to Cartheuser's experiments, is only about one-sixth the weight of the dry leaves, whereas the watery extract amounts to near one-half."

This plant is evidently the Parthenium of Dioscorides, since whose time it has been very generally employed for medical purposes. In natural affinity it ranks with camomile and tansy, and its sensible qualities show it to be nearly allied to them in its medicinal character. Bergius states its virtues to be tonic, stomachic, resolvent, and emmenagogue. It has been given successfully as a vermifuge, and for the cure of intermittents; but its use is most celebrated in female disorders, especially in hysteria;[a] and hence it is supposed to have derived the name Matricaria.[b]

Its smell, taste, and analysis prove it to be a medicine of considerable activity; we may therefore say with Murray, "Rarius "hodie præscribitur, quam debetur."

[a] According to Sim. Paulli, its efficacy in this disorder was very remarkable. *Quadrip. p.* 432.

[b] "Παρθενον, quasi virginalis, quod morbis mulierum uterinis medeatur, hinc vulgo matricaria." &c.—*C. B.*

Lactuca virosa

Published by Phillips. & Fardon, July 1st 1806.

LACTUCA VIROSA. STRONG-SCENTED WILD LETTUCE.

SYNONYMA. Lactuca virosa. *Pharm. Edinb. nov. New. Ed Dispens.* 217. *Murray. App. Med. vol.* 6. 13. Lactuca sylvestris, odore viroso. *Bauh. Pin.* 123. Lactuca sylvestris major, odore opii. *Gerard. Emac.* 309. Lactuca Endiviæ foliis, odore viroso. *Park.* 813. *Ray. Hist.* 219. *Synop.* 161. *Haller. Hist.* 15. L. virosa. *Hudson, Flor. Ang.* 337. *Withering. Bot. Arr.* 835. *Ic. Collin. Obs. vi. præf. Smith Flor. Brit.* 819.

Syngenesia. Polygamia Æqualis. *Lin. Gen. Plant.* 909.

Gen. Ch. Recept. nudum. *Cal.* imbricatus, cylindricus, margine membranaceo. *Pappus* simplex, stipitatus. *Sem.* lævia.

Sp. Ch. L. foliis horizontalibus carina aculeatis dentatis.

ROOT biennial, tapering, branched, firm, furnished with long fibres. Stalk from two to four feet high, slender, erect, round, prickly near the base, above smooth, branched. Branches spreading. Leaves at the root oblong, wedge-shaped, entire, or cut into winged clefts, toothed, commonly prickly at the underside of the midrib, sessile, horizontal: leaves on the stem arrow-shaped, embracing the stalk, either entire or cut into pinnated lobes: upper and floral leaves arrow-shaped, entire, pointed, embracing the branches at which they are placed. Flowers composed of numerous equal yellow florets. Calyx oblong, consisting of several small spear-shaped unequal scales. Florets numerous, uniform, hermaphrodite, each composed of narrow petals, cut at the extremity into four or five minute teeth. Filaments five, very short, hair-like. Antheræ forming a cylindrical tube. Germen egg-shaped. Style filiform. Stigmata two, reflexed. Seeds ovate, compressed. lodged upon the naked receptacle, and furnished with a simple hairy feather placed upon a footstalk.

It grows about ditch banks, borders of fields, and old walls, flowering in July and August.

This plant has a strong ungrateful smell, resembling that of opium, and a bitterish acrid taste; it abounds with a milky juice, in which its sensible qualities seem to reside, and which appears to have been noticed by Dioscorides, who describes the odour and taste of this juice as nearly agreeing with that of the white poppy; its effects are also said, according to Haller, to be powerfully narcotic.

Dr. Collin, at Vienna, (whose name has been frequently mentioned in the course of this work) first brought the Lactuca virosa into medical repute,[a] and its character has lately induced the College of Physicians at Edinburgh to insert it in the catalogue of the Materia Medica. More than twenty-four cases of dropsy are said by Collin to have been successfully treated, by employing an extract prepared from the expressed juice of this plant; which is stated not only to be powerfully diuretic, but by attenuating the viscid humours to promote all the secretions, and to remove visceral obstructions. In the more simple cases, proceeding from debility, the extract, in doses of eighteen to thirty grains a day, proved sufficient to accomplish a cure: but when the disease was inveterate, and accompanied with visceral obstructions, the quantity of extract was increased to three drams: nor did larger doses, though they excited nausea, ever produce any other bad effect; and the patients continued so strong under the use of this remedy, that it was seldom necessary to employ any tonic medicines.

Though Dr. Collin began his experiments with the Lactuca at the Pazman hospital, at the time he was trying the arnica in 1771, yet very few physicians, even at Vienna, have since adopted the use of this plant.

Plenciz indeed has published a solitary instance[b] of its efficacy, while Quarin[c] informs us that he never experienced any good effect

[a] *Observ. circa Morb. P. vi.*

[b] Joseph de Plenciz. *Act. & Obs. Med.* p. 107.

[c] Animadv. *Pract. p.* 188.

Valeriana officinalis

Published by Phillips, & Fo... July 1st 1806

from its use, alledging that those, who were desirous of supporting its character, mixed with it a quantity of extractum scillæ. Under these circumstances we shall only say, that the recommendation of this medicine by Dr. Collin, will be scarcely thought sufficient to establish its use in England.

ORD. IV. AGGREGATÆ.

(From *aggregare* to assemble), comprehending those plants which have aggregate flowers or a number of florets, each of which has a proper and common calyx.

VALERIANA OFFICINALIS. OFFICINAL VALERIAN.

SYNONYMA. Valeriana sylvestris. *Pharm. Lond. & Edinb.* Valeriana sylvestris major. *Bauh. Pin. p.* 164. *Gerard. Emac. p.* 1075. *Park. Theat. p.* 122. *Raii Hist. p.* 388. *Synop. p.* 200. Valeriana foliis pinnatis, pinnis dentatis. *Hal. Hist. Stirp. Helv. n.* 210. Valeriana officinalis. *Hudson. Flor. Ang. p.* 12. *Withering. Bot. Arr. p.* 66. *Smith Flor. Brit.* 36. *Curt. Lond. fasc.* 6. t. 3. *Eng. Bot.* 698.

* Foliis angustioribus.

Class Triandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 44.

Ess. Gen. Ch. Cal. 0. *Cor.* 1-petala, basi hinc gibba, supera. *Sem.* 1.

Sp. Ch. V. floribus triandris, foliis omnibus pinnatis.

THE root is perennial, consisting of a great number of simple fibres, which unite at their origin: the stalk is upright, smooth, channelled, round, branched, and rises from two to four feet in height: the leaves on the stem are placed in pairs upon short broad sheathes; they are composed of several lance-shaped, partially dentated, veined, smooth pinnæ, with an odd one at the end, which is the largest: the radical leaves are larger, stand upon long footstalks, and the pinnæ are elliptical, and deeply serrated: the floral leaves are spear-shaped and pointed: the flowers are small, of a white or purplish colour, and terminate the stem and branches in large bunches: there is no calyx, or only a small narrow rim: the corolla consists of a narrow tube, somewhat swelled on the under side, and divided at the limb into five obtuse segments: the three filaments are tapering, longer than the corolla, and furnished with round antheræ: the germen is placed beneath the corolla, and supports a slender style, shorter than the filaments, and terminated by a thick bearded stigma: the capsule is crowned with a radiated feather, and contains one seed of an oblong shape. It flowers in June, and commonly grows about hedges and woods.

The narrower-leaved variety of this species of Valerian, which does not exceed two feet in height, and affects dry heaths and high pastures, is justly in more repute than the other; its roots manifest stronger sensible qualities, and consequently possess more medicinal power; their smell is strong, and has been compared to that of a mixture of aromatics with fetids; their taste unpleasantly warm, bitterish, and subacrid. "The powdered root, infused in water or digested in rectified spirit, impregnates both menstrua strongly with its smell and taste. Water distilled from it smells considerably of the root, but no essential oil separates, though several pounds be submitted to the operation at once."†

Valerian is supposed to be the φε of Dioscorides and Galen,* by

† *Lewis, M. M.*

* Græcis φε esse credo, a φυ abominantis: olet enim radix felinum quid, non tamen sine grato odore nardi *Hoff.* "This smell is highly delightful to cats; rats are also said to be equally fond of these roots, and that rat-catchers employ them to draw the rats together." *Withering, l. c.*

whom it is mentioned as an aromatic and diuretic: it was first brought into estimation in convulsive affections by Fabius Columna,[b] who relates that he cured himself of an epilepsy by the root of this plant; we are told however, that Columna suffered a relapse of the disorder, and no further accounts of the efficacy of Valerian in epilepsy followed till those published by Dominicus Panarolus[c] fifty years afterwards, in which three cases of its success are given. To these may be added many other instances of the good effects of Valerian Root in this disease, since published by Cruger,[d] Schuchmann,[e] Riverius,[f] Sylvius,[g] Marchant,[h] Chomel,[i] Sauvages,[k] Tissot,[l] and others.

The advantages said to be derived from this root in epilepsy caused it to be tried in several other complaints termed nervous, particularly those produced by increased mobility and irritability of the nervous system, in which it has been found highly serviceable.[m] Bergius[n] states its *virtus* to be antispasmodic, diaphoretic, emmenagogue, diuretic, anthelminthic.* Under the head *usus* he

[b] *Phytobasamos Neapol.* 1592. *p.* 97.

[c] *Iatrologism. s. medicin. hist. pentac. quinque Rom.* 1643. *Pentec. i. Obs.* 33. *p.* 20.

[d] *Eph. Nat. Cur. Dec.* 2. *A.* 7. *Obs.* 78.

[e] *Eph. Nat. Cur. Dec.* 2. *A.* 4. *Obs.* 44. *p.* 116. *& App. ad Dec.* 3. *A.* 3. *p.* 86.

[f] *Prax. Med. Lib. i. p.* 62. [g] *Opera, p.* 427.

[h] *Mem. de L'Acad. d. Sc. de Paris,* 1706. *p.* 333.

[i] *Pl. Usuelles. T. i. p.* 228. [k] *Nosol. Method. T. iii. P.* 2. *p.* 231. *Ed.* 8vo.

[l] *Traité de l'epilepsie, p.* 310.

[m] Haller says, "Ego certe ad hystericos morbos, nimiamque nervorum sensibilitatem, frequenter cum bono eventu hac radice usus sum; et in ipsa epilepsia, non malo successu. *Stirp. Helv, n.* 210. [n] *Mat. Med. p.* 30.

* He says, "Emeticam illam nunquam vidi, nec laxantem." The latter quality is however very generally ascribed to it by medical writers.

enumerates Epilepsia, Convulsiones, Hysteria, Hemicrania, °Visus hebetudo. Dr. Cullen says, " its antispasmodic powers are very well established, and I trust to many of the reports that have been given of its efficacy; and if it has sometimes failed, I have just now accounted for it,[p] adding only this, that it seems to me, in almost all cases, it should be given in larger doses than is commonly done. On this footing, I have frequently found it useful in epileptic, hysteric, and other spasmodic affections."[q] It is said however, that in some cases of epilepsy at the Edinburgh Dispensary, it was given to the extent of two ounces a day without effect;[r] and our own experience warrants us in saying, that it will be seldom found to answer the expectations of the prescriber. The root, in substance, is most effectual, and is usually given in powder from a scruple to a dram: its unpleasant flavour may be concealed by a small addition of mace. A tincture of Valerian in proof spirit, and in volatile spirit, are ordered in the London Pharmacopœia.

° Fordyce commends it highly in this disease, *De Hemicrania*, *p.* 91. Whytt, who joined it with manna, experienced its utility in epilepsy, *On Nerv. Dis. p.* 513. Joined with guaiacum, Morgan found it useful in resolving glandular or strumous humours. *Phil. princ. p.* 424.

[p] From the disease depending upon different causes, and from the root being frequently employed in an improper condition.

[q] *Mat. Med. vol. ii. p.* 372. [r] *New Ed. Dispens. by Dr. Duncan, p.* 300.

Plantago major

Published by Phillips, & Fardon, July 1st 1806.

ORD. V. CONGLOMERATÆ.

(From *con* and *glomus* a clew), comprehending those plants in which the flowers stand on the branches of the footstalk and are thus closely but irregularly connected.

PLANTAGO MAJOR. COMMON GREAT PLANTANE, Or, WAY-BREAD.

SYNONYMA. Plantago. *Pharm. Edin.* Plantago foliis petiolatis, ovatis, glabris; spica cylindrica. *Hal. Stirp. Helv. n.* 660. Plantago latifolia sinuata. *Bauh. Pin.* 189. Plantago simpliciter dicta. *Raii Hist. Plant.* 876. Plantago latifolia vulgaris. *Parkinson,* 493. Plantago vulgaris. *Gerard.* 419. Plantago Major. *Curtis, Flor. Lond. Relhan. Flor. Cantab.* p. 61. *Smith Flor. Br.* 182. *Withering, Bot. Arrang.* 142. αρνογλωσσον *Dioscorid.* * (lingua agnina) Cl. Aiton pro varietatibus habet,

α Plantago latifolia vulgaris. *Park. Theat.* 493.

β Plantago major, panicula sparsa. *Bauh. Hist.* 3. *p.* 503.

γ Plantago latifolia rosea, floribus quasi in spica dispositis. *Bauh. Pin.* 189. *vide Hort. Kew.*

* (Plantago Media) It has also been named from the number of ribs, or nerves of the leaf, as πολυνευρος, ἑπταπλευρος.

Class Tetrandria. *Ord.* Monogynia. *L. Gen. Plant* 142.

Ess. Gen. Ch. *Cal.* 4-fidus. *Cor.* 4-fida: limbo reflexo. *Stamina* longissima. *Caps.* 2-locularis, circumscissa.

Sp. Ch. P. foliis ovatis glabris, scapo tereti, spica flosculis imbricatis.

THE root is perennial, short, thick, and puts forth several long whitish fibres, which strike down in a perpendicular direction: the leaves are oval, procumbent, irregularly subdentated, of a pale green colour, ribbed; ribs, commonly seven, often five, and sometimes nine: the footstalks are long, concave above, and proceed from the root; the flower-stems are generally three or four, about a span high, downy, round, smooth below the spike, and somewhat incurvated; the calyx is of four leaves, somewhat erect, oval, obtuse, smooth, and persistent; the flowers are small, produced on a long cylindrical imbricated spike, which occupies more than half the stem; each flower consists of a roundish tube, narrow at the mouth, and the four segments are heart shaped, pale, withered, and bent downwards; the bractea is oval, fleshy, and larger than the calyx; the stamina are whitish, longer than the corolla, and the antheræ are purple: the germen is oval, the style short and filiform, and the stigma simple; the capsule divides horizontally in the middle; and, according to Mr. Curtis, contains about twenty unequal brown seeds. It grows commonly in pastures and way-sides, and flowers in June.

The name Plantago, is omitted in the London Pharmacopœia, but it is still retained in the Materia Medica of the Edinburgh college, in which the leaves are mentioned as the pharmaceutical part of the plant: these have a weak herbaceous smell, and an austere bitterish subsaline taste; and their qualities are said to be refrigerant, attenuating, substyptic, and diuretic.

Plantago was formerly reckoned amongst the most efficacious of vulnerary herbs; and by the peasants the leaves are now commonly applied to fresh wounds, and cutaneous sores. Inwardly, they

Viscum album.

Published by Phillips, & Fordon, July 2nd 1806.

have been used in phthisical[a] complaints,[b] spitting of blood, and in various fluxes, both [c] alvine and hæmorrhagic. The seeds, however, seem to us better adapted to relieve pulmonary diseases than the leaves, as they are extremely mucilaginous. The roots have also been recommended for the cure of tertian intermittents; and from the experience of Bergius, not undeservedly: "Plurimæ sunt narrationes de utilitate radicis plantaginis in Tertianis. Periculum ipse feci, dosi largiori, scil. a drachmis 3 ad 6, quovis die, sub apyrexia; sed contra febres autumnales nihil valuit Plantago; in vernalibus autem febribus subinde opem tulit.[d]" An ounce or two of the expressed juice, or the like quantity of a strong infusion of Plantane, may be given for a dose; in agues the dose should be double this quantity, and taken at the commencement of the fit.

[a] Celsus, lib. 3. c. 22. Schulz, Mat. Med p. 412. Pliny, lib. 26. c. 2. Petzoldt. Eph. Nat. Cur. cent. 7. Obs. 10. p. 25. [b] Boyle de util. Phil. Nat. p. 2. p. 150. [c] Rosenst. Baskd. p. 81. [d] Mat. Med. p. 70.

"Plantane has been alledged to be a cure for the bite of the rattle-snake: but for this there is probably but little foundation, although it is one of the principal ingredients in the remedy of the Negro Cæsar, for the discovery of which he received a considerable reward from the Assembly of South Carolina." Duncan's New Edinb. Dispen.

VISCUM ALBUM. MISSLETOE.

SYNONYMA. Viscus. *Pharm. Dale.* 313. *Alston. ii.* 53. *Lewis.* 666. *Edinb. New Dispens.* 302. *Cullen. ii.* 47. *Murray. i.* 199. *Bergius.* 788. *Ger Emac.* 153. *Ray. Syn.* 464. *Hist.* 1583. Viscum baccis albis. *Bauh. Pin.* 423. Viscum vulgare. *Park. Theat.* 1392. *Hall. n.* 1609. V. album. *Hudson. Flor. Ang.* 431. *Withering. Bot. Arr.* 1112. *Ic. Mill. Illust.*

Dioecia Tetrandria. *Lin. Gen. Plant.* 1105.

Gen. Ch. *Masc.* *Cal.* 4-partitus. *Cor.* 0. *Filamenta* 0. *Antheræ* calyci adnatæ.

Fem. *Cal.* 4-phyllus, superus. *Cor.* 0. *Stylus* 0. *Bacca* 1-sperma, *Sem.* cordatum.

Sp. Ch. V. foliis lanceolatis obtusis, caule dichotomo, spicis axillaribus.

A PARASITICAL evergreen shrub, insinuating its radical fibres into the wood of the trees on which it grows. Branches numerous, regularly dichotomous, covered with smooth bark, of a yellowish green colour. Leaves spear-shaped, blunt, entire, striated, standing in pairs upon short footstalks. Flowers male and female in different plants, small, axillary, in close spikes. Calyx of the *male flower* divided into four ovate equal segments. Corolla none. Filaments none. Antheræ four, oblong, attached to the calyx. Calyx of the *female flower* divided into four leaves, which are small, ovate, deciduous, placed on the common germen. Corolla none. Germen beneath, oblong, three-edged, indistinctly crowned with a border with four clefts. Style none. Stigma blunt, and somewhat notched. Fruit a globular white smooth one-celled berry, containing a fleshy seed, which is inversely heart-shaped, blunt, compressed.

It grows on various kinds of trees, producing its flowers in May; but its berries remain throughout the winter.

This singular parasitical plant most commonly grows on apple trees, also on the pear, hawthorn, service, oak, hasel, maple, ash, lime-tree, willow, elm, hornbeam, &c. It is supposed to be propagated by birds, especially by the fieldfare and thrush, which feed upon its berries, the seeds of which pass through the bowels unchanged, and along with the excrements adhere to the branches of trees where they vegetate.*

* Or if the berries, when fully ripe, be rubbed on the smooth bark of almost any tree, they will adhere closely and produce plants the following Winter.

The Misseltoe of the oak, has, from the times of the ancient druids been always preferred to that produced on other trees; but it is now well known that the viscus quernus differs in no respect from others.

This plant is the ἶξος of the Greeks, and was in former times thought to possess many medicinal virtues; however, we learn but little concerning its efficacy from the ancient writers on the Materia Medica; nor will it be deemed necessary to state the extraordinary powers ascribed to the Misseltoe by the crafty designs of duidical knavery.

" Both the leaves and branches of the plant have very little smell, and a very weak taste of the nauseous kind. In distillation they impregnate water with their faint unpleasant smell, but yield no essential oil. Extracts, made from them by water, are bitterish, roughish and subsaline. The spirituous extract of the wood has the greatest austerity, and that of the leaves the greatest bitterness. The berries abound with an extremely tenacious most ungrateful sweet mucilage." §

The Viscus Quernus obtained great reputation for the cure of epilepsy; and a case of this disease, of a woman of quality, in which it proved remarkably successful, is mentioned by Boyle.[a] Some years afterwards its use was strongly recommended in various convulsive disorders by Colbach, who has related several instances of its good effects.[b] He administered it in substance in doses of half a dram, or a dram, of the wood or leaves, or an infusion of an ounce.

This author was followed by others, who have not only given testimony of the efficacy of the Misseltoe in different convulsive affections, but also in those complaints denominated nervous, in

§ *Lewis. l. c.*

[a] See *Usefulness of Nat. & Exper. Philos.* 174.

[b] *Dissertation concerning the Misseltoe, a most wonderful specifick remedy for the cure of convulsive distempers.*

which it was supposed to act in the character of a tonic. But all that has been written in favour of this remedy, which is certainly well deserving of notice, has not prevented it from falling into general neglect; and the Colleges of London and Edinburgh have expunged it from their catalogues of the Materia Medica.

ORD. VI. UMBELLATÆ.

The umbelliferous plants form a numerous and natural association: those that grow in dry situations are commonly warm and aromatic, but those that are aquatic are narcotic and poisonous.

ANGELICA ARCHANGELICA. GARDEN ANGELICA.

SYNONYMA. Angelica. *Pharm. Lond. & Edinb.* Angelica sativa. *Bauh. Pin. p.* 155. *J. Bauh. Hist. vol.* iii. *p.* 140. *Gerard. Emac. p.* 999. *Park. Theat. p.* 939. *Raii Hist. p.* 434. *Synop. p.* 208. Angelica foliis duplicato-pinnatis, ovato-lanceolatis serratis. *Hal. Stirp. Helv. n.* 807. *Flor. Dan. t.* 206. *With.* 297. *Smith.* 31.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 138.

Ess. Gen. Ch. *Fructus* subrotundus, angulatus, solidus, *stylis* reflexis. *Corollæ* æquales: petalis incurvatis.

Sp. Ch. A. foliorum impari lobato.

Angelica Archangelica

Published by Phillips, & Fordon, July 1st 1806.

THE root is biennial, long, thick, fleshy, and furnished with numerous fibres: the stalk is thick, strong, jointed, channelled, round, of a purplish colour, rises to the height of six or eight feet, and sends off several branches, which terminate in large umbels: the leaves are pinnated, large, numerous, consisting of several pairs of oval, serrated, pointed, veined, irregular shaped lobes or pinnæ, terminated by an odd one: the flowers grow in large terminal umbels, which are round, and composed of many radii: the corolla is small, white, and divided into five petals, which have their points turned inwards: the general involucrum consists of three or five narrow pointed leaves, the partial involucrum of five, and the calyx is cut into five minute segments; the five stamina are longer than the petals, spreading, and furnished with roundish antheræ; the germen is placed below the corolla, and supports two reflected styles, crowned with obtuse stigmata: the seeds are two, oval, flat on one side, convex on the other, and marked with three furrows.—It is a native of Lapland, [a] and flowers in June and August.

Angelica, as a native of a northern climate, seems to have been unknown to the ancients. It has been cultivated in Britain more than two centuries,[b] and its medical character [c] has rendered it of sufficient importance to be very generally propagated by the English gardener.—The roots of Angelica have a fragrant agreeable smell, and a bitterish pungent taste: on being chewed they are first sweetish, afterwards acrid, and leave a glowing heat in the mouth and fauces, which continues for some time. The stalk, leaves, and seeds, which are also directed in the Pharmacopœias, appear to possess the same qualities, though in an inferior degree. It is said that "on wounding the fresh root early in the spring, it

[a] "Ubique per omnes alpes Lapponiæ juxta rivulos vulgaris est." Lin. Flor. Lap. p. 67.

[b] Cultivated in 1568. Turn. herb. part. 3. p. 5. Vide Hort. Kew.

[c] We may also add its use in confectionary.

yields from the inner part of the bark an unctuous yellowish odorous juice, which gently exsiccated retains its fragrance, and proves an elegant aromatic gummy resin. On cutting the dry root longitudinally, the resinous matter, in which the virtue and flavour of Angelica resides, appears concreted in little veins."[d] Rectified spirit extracts the whole of the virtues of the root; water but very little; and in distillation with the latter, a small portion of very pungent essential oil may be obtained.

We are told by Linnæus, that the Laplanders entertain a high opinion of the utility of Angelica, and employ it both as food and as a medicine[e]; and since Aromatic plants are rarely inhabitants of the Polar regions, their partiality for Angelica is extremely natural: and from the enumeration of the virtues of this plant by Bergius,[f] we should also suspect him of being influenced by the same physical cause. Angelica must however be allowed to possess aromatic, and what are called carminative, powers, and is used accordingly in the tinctura aromatica of the Edinb. Pharm. but as many other simples surpass it in these qualities, it is seldom employed in the present practice.

[d] Lewis Mat. Med. p. 59. [e] Flor. Lap. a. c.

[f] *Virtus*: alexiteria, stomachica, sudorifera, carminativa. It may be remarked that he says nothing of its *usus*. Mat. Med. p. 205. It was formerly recommended in female diseases. Mensibus lochiisque obstructis, partu difficili, suffocatione uteri; contra venena, & febres malignas.

Angelica sylvestris

Published by Phillips, & Fardon, August 1st 1806.

ANGELICA SYLVESTRIS. WILD ANGELICA

SYNONYMA. Angelica sylvestris. *Pharm. Edinb. Ger. Emac.* 999. *Raii. Hist.* 437. *Synop.* 208. *Park. Theat.* 940. Angelica sylvestris major. *Bauh. Pin.* 155. A. sylvestris. *Huds. Flor. Ang.* 118. *Withering. Bot. Arr.* 290. *Haller. Stirp. Helv. n.* 806. *Smith Flor. Brit.* 311.

Sp. Ch. A. foliolis æqualibus ovato-lanceolatis serratis.

ROOT perennial, long, thick, tapering, branched, externally brown, internally white. Stalk thick, hollow, jointed, scored, branched, round, smooth, several feet in height. Leaves pinnated, composed of ovate serrated equal pinnæ, with an odd one at the end. Leaf-stalks channelled on the upper surface, standing upon a large membranous sheath inclosing the stem. Flowers white, in large umbels, which are convex, and placed on long stalks arising from the sheaths of the leaf-stalks. General involucrum most commonly wanting, or sometimes composed of small slender leaves. Partial involucrum, consisting of from five to twelve permanent narrow pointed unequal leaves. Corolla of five petals, which are nearly equal, ovate, pointed, bent inwards. Filaments five, spreading, longer than the petals. Antheræ roundish. Germen beneath. Styles two, bent downwards. Stigmata blunt. Fruit furnished with four winged appendages, and on each side three striæ. Seeds two, egg-shaped, plano-convex, with a membranaceous border, convex side, marked with three ridges.

It grows in marshy woods and hedges, flowering in June and July.

As the root of this species of Angelica is still retained in the catalogue of the Materia Medica of the Edinburgh Pharmacopœia, we have judged it expedient to present a figure of the plant; and it is only in compliance with this authority that we have been induced to do so: for the garden Angelica, of which a plate is given in the

preceding article, not only possesses all the medicinal properties of this species in a superior degree, but may always be more readily procured.

PHELLANDRIUM AQUATICUM. FINE LEAVED WATER-HEMLOCK.

SYNONYMA. Fœniculum aquaticum. *Pharm. Murray. App. Med. i. p.* 267. *Rivin. Pent. tab.* 65. *Ernstingii Phellandrologia. Lange, vom Wasserfenchel.* 1771. Cicutaria palustris tenuifolia. *Bauh. Pin.* 161. *Park.* 933. Cicutaria palustris. *Ger. Emac.* 1063. *Raii. Hist.* 452. *Synop.* 215. *Petiv, t.* 28. *f.* 4. *Hall. n.* 757. P. aquaticum. *Hudson, Flor. Ang.* 122. *Lightf. Flor. Scot.* 163. *Withering. Bot. Arr.* 298. *Smith. Flor. Brit.* 321. *Eng. Bot.* 684.

Pentandria Digynia. *Lin. Gen. Plant.* 353.

Gen. Ch. *Flosculi* disci minores. *Fructus* ovatus lævis coronatus perianthio et pistillo.

Sp. Ch. P. foliorum ramificationibus divaricatis.

ROOT biennial, thick, tapering, jointed, sending off numerous long slender fibres. Stalk thick, hollow, smooth, jointed, branched, scored, usually about two feet in height. Leaves large, triply pinnated, ramifying at right angles, or divaricating; leafits irregularly pinnatifid; leaves under the water filiform. Flowers small, white, in terminal umbels. General involucrum none. Partial involucrum of seven leaves, which are pointed, and about the length of the proper umbel. Calyx five-toothed, permanent. Flowers all fertile,

Thalictrum aquaticum

Published by Phillips, & Fardon, August 1.st 1806.

and forming a flat uniform surface. Individual florets unequal, smaller at the centre. Petals five, heart-shaped, bent inwards. Filaments five, capillary, longer than the petals. Antheræ roundish. Germen ovate. Styles two, tapering, upright, permanent. Stigmata blunt. Fruit ovate, smooth, divisible into two parts or seeds.

It grows in rivers, ditches, and pools, flowering in June and July.

This plant is generally supposed to possess deleterious qualities. Horses, on eating it, are said to become paralytic; but this effect should not be ascribed to the Phellandrium, but to an insect which resides within its stalks, viz. the *Curculio paraplecticus*.

The seeds of the plant, however, according to Dr. Lange,[a] when taken in large doses, produce a remarkable sensation of weight in the head, accompanied with giddiness, intoxication, &c. and therefore may be deemed capable of proving an active medicine. They are oblong, striated, of a greenish yellow, about the size of those of dill, and manifesting an aromatic acrid taste, approaching nearly to that of the seeds of lovage. Distilled with water they yield an essential oil, of a pale yellow colour, and of a strong penetrating smell. One pound of the seeds affords an ounce of watery extract, but nearly double this quantity of spirituous extract, of which more than three drams consists of resin.[b]

Pliny [c] states the seeds of Phellandrium to be an efficacious medicine in calculous complaints, and disorders of the bladder; and in this opinion he is followed by Dodonæus,[d] who mentions them also as possessing diuretic and emmenagogue powers. But on these authorities little reliance is to be placed; so that the efficacy of this plant rests chiefly on the testimonies of Ernstingius and Lange, by whom various cases of its successful use are published, especially in wounds and inveterate ulcers of different kinds, and

[a] See *Rem. Bruns.* 235.

[b] *Ernstingius, l. c.* [c] *Lib.* 17. *c* 13.

[d] *Pempt.* 591.

even in cancers;[e] also in phthisis pulmonalis, asthma, dyspepsia, intermittent fevers, &c.

About two scruples of the seed, two or three times a day, was the ordinary dose given.

Though the disorders here noticed are so multifarious and dissimilar as to afford no satisfactory evidence of the medicinal qualities of these seeds, yet they appear to us well deserving of further investigation, according to the maxim '*Ubi virus ibi virtus.*'

[e] Boerhaave also speaks highly of its discutient power in all kinds of tumours. *Hist. Plant. Hort. Ludg. Bat.* 1. *p.* 94.

OENANTHE CROCATA. HEMLOCK WATER-DROPWORT.

SYNONYMA. Oenanthe Chærophylli foliis. *Bauh. Pin.* 162. Filipendula cicutæ facie. *Ger. Emac.* 1057. Oenanthe, succo viroso, cicutæ facie *Lobelii. Bauh. Hist. iii.* 193. *Park. Theat.* 894. *Raii. Synop.* 210. *Morris. Sect.* 9. *tab.* 9. *Watson. Phil. Trans. v.* 44. *n.* 480. *tab.* 3. Oenanthe crocata. *Huds. Flor. Ang.* 121. *Withering. Bot. Arr.* 297. *Lightfoot. Flor. Scot.* 162. *Smith. Flor. Brit.* 317. *Flor. Dan.* 846. *Eng. Bot.* 363.

Pentandria Digynia. *Lin. Gen. Plant.* 352.

Gen. Ch. *Flosculi* difformes: in disco sessiles, steriles. *Fructus* calyce et pistillo coronatus.

Sp. Ch. Œ. foliis omnibus multifidis obtusis subæqualibus.

ROOT perennial, divided into numerous parts, or oblong tubercles, furnished with long slender fibres. Stalks erect, channelled, round, smooth, branched, of a yellowish red colour, two or three

Oenanthe crocata.

Published by Phillips & Fardon, August

feet in height. Leaves simply and doubly pinnated; smaller pinnæ wedge-shaped, smooth, streaked, jagged at the edges: larger pinnæ three-lobed, indented, resembling those of smallage. Flowers in umbels, which are terminal, spreading, and almost globular. General involucrum none. Partial involucrum composed of many small leaves. Calyx permanent, five-toothed. Florets unequal, those at the circumference often sterile. Petals five, heart-shaped, broad, bent inwards, emarginated. Filaments five, slender, tapering, twice the length of the petals. Antheræ oblong, brown. Germen beneath the corolla. Styles two, awl-shaped, reddish, permanent. Stigmata pointed. Fruit oblong, striated, divisible into two parts or seeds, which are convex on one side, and flat on the other.

It grows on the banks of rivers, and in ditches, flowering in June and July.

We have selected this plant, to record it as a powerful poison, rather than as a medicine. Its root, which is not unpleasant to the taste, is, by Dr. Poultney, esteemed to be the most deleterious of all the vegetables which this country produces.

Mr. Howell, surgeon at Haverfordwest, relates, that "eleven "French prisoners had the liberty of walking in and about the "town of Pembroke; three of them, being in the fields a little "before noon, dug up a large quantity of this plant, which they "took to be wild celery, to eat with their bread and butter for "dinner. After washing it, they all three ate or rather tasted of the "roots. As they were entering the town, without any previous "notice of sickness at the stomach, or disorder in the head, one of "them was seized with convulsions. The other two ran home, and "sent a surgeon to him. The surgeon endeavoured first to bleed, "and then to vomit him: but those endeavours were fruitless, and "he died presently. Ignorant of the cause of their comrade's death, "and of their own danger, they gave of these roots to the other "eight prisoners, who all ate some of them with their dinner. "A few minutes afterwards the remaining two, who gathered the "plants, were seized in the same manner as the first; of which one

" died; the other was bled, and a vomit, with great difficulty " forced down, on account of his jaws being as it were locked to- " gether. This operated, and he recovered, but was sometime " affected with dizziness in his head, though not sick or the least " disordered in his stomach. The other eight being bled and " vomited immediately, were soon well."[a]

At Clonmel, in Ireland, eight boys mistaking this plant for water-parsnep, ate plentifully of its roots: about four or five hours after, the eldest boy became suddenly convulsed, and died; and before the next morning four of the other boys died in a similar manner. Of the other three, one was maniacal several hours, another lost his hair and nails, but the third escaped unhurt.[b]

Stalpaart vander Wiel mentions two cases of the fatal effects of this root; these, however, were attended with great heat in the throat and stomach, sickness, vertigo, and purging. They both died in the course of two or three hours after eating the root.

Allen, in his *Synopsis Medicinæ,* also relates that four children suffered greatly by eating this poison. In these cases great agony was experienced before the convulsions supervened; vomitings likewise came on, which were encouraged by large draughts of oil and warm water, to which their recovery is ascribed.

The late Sir William Watson,[c] who refers to the instances here cited, also says that a Dutchman was poisoned by the *leaves* of the plant boiled in pottage.

It appears from various authorities that most brute animals are not less affected by this poison than man; and Mr. Lightfoot informs us that a spoonful of the juice of this plant, given to a dog, rendered him sick and stupid; but a goat was observed to eat the plant with impunity.

The great virulence of this plant has not however prevented it

[a] Phil. Trans. vol. 44. [b] Ibid. l. c.

[c] Sir William likewise informs us, that Mr. Miller knew a whole family at Battersea, who were poisoned with this plant. And that Mr. Ehret, while drawing the fresh plant, was affected with universal uneasiness and vertigo

39.

Cicuta *virosa*

Published by Phillips, & Fordan, August 1st 1806

from being taken medicinally. In a letter from Dr. Poultney to Sir William Watson,[d] we are told that a severe and inveterate cutaneous disorder was cured by the juice of the root, though not without exciting the most alarming symptoms. Taken in the dose of a spoonful, in two hours afterwards the head was affected in a very extraordinary manner, followed with violent sickness and vomiting, cold sweats and rigors; but this did not deter the patient from continuing the medicine, in somewhat less doses, till it effected a cure.

[d] Phil. Trans. vol. 62.

CICUTA VIROSA. WATER HEMLOCK.

SYNONYMA. Cicuta Aquatica. *Pharm. Murray. i.* 271. *Bergius.* 212. *Wepfer. Hist. Cicutæ Aquat. p.* 4. Sium alterum olusatri facie. *Lobel. Ic.* 208. *Ger. Emac.* 256. *Ray Hist.* 450. *Synop.* 212. Sium erucæ folio. *Bauh. Pin.* 154. Sium majus angustifolium. *Park. Theat.* 1241. *Conf. Phil. Trans. v.* 44. 242. *tab.* 4. *Hal. n.* 781. *Flor. Dan.* 208. Cicuta virosa. *Hudson. Flor. Ang.* 122. *Lightfoot. Scot.* 164. *With. Bot. Arr.* 299. *Smith. Brit.* 322. *Flor. Dan.* 208. *Eng. Bot.* 479.

Pentandria Digynia. *Lin. Gen. Plant.* 354

Gen. Ch. *Fructus* subovatus, sulcatus.

Sp. Ch. C. umbellis oppositifoliis, petiolis marginatis obtusis.

ROOT perennial, thick, short, hollow, beset at the joints with numerous slender fibres. Stalk thick, round, fistular, striated, smooth, sparingly branched, about four feet in height. Leaves pinnated, leafits usually placed in ternaries, spear-shaped, serrated;

serratures white at the points. Flowers in large expanding umbels. Partial involucrum composed of several short bristle-shaped leaves. Calyx scarcely discernible. Florets all uniform, fertile, each consisting of five petals, which are ovate, turned inwards, of a greenish white. Filaments five, capillary, longer than the petals. Antheræ simple, purplish. Styles two, at first close, afterwards divaricating. Stigmata simple. Fruit egg-shaped, divisible into two seeds, which are ribbed and convex on one side, and flat on the other.

It grows on the borders of pools and rivers, flowering in July and August.

This plant, which in its recent state has a smell resembling that of smallage, and a taste somewhat like that of parsley, is well known to be a powerful poison. Haller supposes it to be the Κώνειον of Dioscorides; but whether it is the Athenian cicuta, or the plant of which the poisonous potion of the Greeks was composed, cannot possibly be ascertained.

The root has a strong smell, and a warm somewhat acrid taste; by distillation with water it yields a volatile matter, which is of a narcotic quality, and of a very ungrateful odour.

It appears from Bergius, that Water-Hemlock, in its dried state, may be taken in a considerable quantity without producing any bad effect;[a] but of the fatal effects of its root when fresh, numerous instances are recorded. Of two boys and six girls, who ate of this root for that of parsnep, the greater part died in a short time afterwards, those only escaping who were enabled to discharge it by vomiting. The symptoms it produced were intoxication, vertigo,

[a] Recentem cicutam nunquam adhibui; pilulas vero e succo cicutæ expresso & inspissato, cum pulvere foliorum formatas, dedi fœminæ, cancro vero mammarum laboranti, incipiendo a parca dosi, sensim adscendendo ad dracm. 3. quotidie; sed nullum effectum inde sensit, neque bonum, nec malum. Præscripsi famulo cuidam decoct. saturat. herbæ cicutæ siccatæ libr. 4. quod externe adhiberet, sed per errorem intra binas horas totam ebibit lagunculam, absque ullo tamen insequente damno." *Vide l. c.*

great heat and pain in the stomach, convulsions, and even epilepsy, distortions of the eyes, vomiting or retching, a discharge of blood from the ears, swelling of the abdomen, hiccup, spasms, &c.[b] In the case of a man who had eaten of this poisonous root, we are told the symptoms were vertigo, succeeded by delirium, with constant heat at the stomach, and inextinguishable thirst: these symptoms were of long continuance, and followed by an erysipetalous tumour of the neck.[c]

To cite all the instances related of the deleterious effects of this root would be unnecessary, as those here stated from Wepfer will sufficiently show the train of symptoms which usually follow the taking of this poison. It may be observed however that in most of the cases in which it proved fatal, the patients died in a convulsed or epileptic state, and that whenever the root was rejected by vomiting only a slight degree of stupefaction was for a few hours experienced.[d]

On examination of the bodies of those who perished by eating this root, we are told that the stomach and intestines were discovered to be inflamed, and even in a gangrenous or eroded state, and the blood-vessels of the brain much distended.[e]

To several brutes this plant has likewise proved mortal; but the facts upon this point are somewhat vague and various. Though said to be a fatal poison to cows, it is eaten with impunity by goats and sheep.[f]

[b] *Wepfer. l. c.* [c] See *Eph. Nat. Cur. Cent.* 10. *Obs.* 58. *p.* 355.

[d] See Bresl. Samml. 1722. p. 286. Schwencke gives an account of four boys who had the misfortune to eat this root, three of whom died in convulsions; the other was saved by the timely administration of an emetic.

[e] Vide Wepfer, Schwencke, *Bresl. Samml.* 1722. *p.* 286. *Eph. Nat. Cur. Dec.* 2. *a.* 6. *p.* 321.

[f] ——videre licet pinguescere sæpe cicuta
Barbigeras pecudes, homini quæ est acre venenum.
LUCRET.

As an internal medicine the Cicuta aquatica is universally superseded by the common hemlock; but externally employed in the way of a poultice, it is said to afford relief in various fixed pains, especially those of the rheumatic and arthritic kind.

BUBON GALBANUM. LOVAGE-LEAVED BUBON.

SYNONYMA. Bubon Galbanum. *Jacquin. Hort. Vindob. vol. 3, p.* 21. Anisum Africanum frutescens, folio anisi, galbaniferum. *Pluken. Alm. p.* 31. *t.* 12. Ferula Africana galbanifera, folio et facie ligustici. *Herm. Parad. p.* 163. *t.* 163. Gummi-resina. Galbanum. *Pharm. Lond. & Edin.* Χαλβάνη *Dioscorid.* Γαλβη *Græc.*

Class Pentandria. *Ord.* Digynia. *L. Gen. Plant.* 350.

Ess. Gen. Ch. *Fructus* ovatus, striatus, villosus.

Sp. Ch. B. foliolis rhombeis dentatis striatis glabris, umbell. paucis.
L. B. foliolis ovato-cuneiformibus acutis argute serratis, umbellis paucis, seminibus glabris, caule frutescente glauco. *Aiton's Hort. Kewen.*

THE stalk is shrubby, several feet high,[a] slender, purplish, covered with a glaucous-coloured exudation,[b] round, bending, knotted or jointed, towards the bottom woody and naked, but

[a] Jacquin says five feet or more; but this plant is now growing in the King's garden at Kew, four yards high.

[b] This observation applies to the younger plants, or to the upper and softer part of the stalk.

Bubon Galbanum.

Published by Phillips, & Fardon, August 1st 1806.

towards the top sending off leaves and branches; the compound leaves rise from the striated sheathes of the stem, they are subtripinnated, the uppermost subbipinnated, and have strong round ribs; the simple leaves are rhomboidal, acute, thickish, of a sea-green colour, veined, subtrilobed, cut, or irregularly serrated, but near the base entire, and some leaves upon the upper branches are somewhat wedge-shaped; the principal umbel terminates the stem, and is large, plano-convex, and composed of numerous radii; the lateral umbels are few, and grow upon slender pendent branches; the leaflets of the general involucrum are about twelve, narrow, lanceolated, membraneous, whitish, and bent downwards; of the partial involucrum they are six, of the same shape and patent. The flowers are all hermaphrodite, fertile, first open at the circumference of the umbel, and followed successively by those towards the centre; the petals are equal, patent, have their points turned inwards, and are of a greenish yellow colour: the stamina are greenish, longer than the petals, and the antheræ are yellow; the germen is round and narrow at the base, the styles are two, short and tapering; the seeds are two, brownish, oval, with smooth uneven surfaces, and marked with three elevated lines. The whole plant is smooth, has an aromatic smell, and an acrid biting taste. It is a native of Africa, about the Cape of Good Hope, and flowers in June and July. It was first introduced into Britain by Mr. John Gerard in 1596,[c] and all the four species described by Linnæus have been since cultivated by Mr. Miller. Through the industry of Mr. Masson, a new species of the Bubon (the lævigatum) has been discovered at the Cape of Good Hope, and is now in the Royal garden at Kew. Notwithstanding we have represented the Bubon Galbanum as the plant yielding the officinal drug; yet it is still a matter of doubt which species of these umbelliferous plants really produces it; and although we have referred to Herman's Ferula Africana, yet we wish to observe, that he thought this

[c] Aiton's Hort. Kew.

matter still uncertain.[d] It seems highly probable that Galbanum is obtained from different species of the Bubon,[e] though, upon the authority of Linnæus, the London, Edinburgh, and other medical colleges, confine their reference to the species we have figured.

The juice is obtained partly by its spontaneous exudation from the joints of the stem, but more generally and in greater abundance by making an incision in the stalk a few inches above the root, from which it immediately issues, and soon becomes sufficiently concrete to be gathered.

Galbanum is commonly imported into England from Turkey, and from the East-Indies, in large softish ductile pale-coloured masses, which by age acquire a brownish yellow appearance; these are intermixed with distinct white grumes or tears, which are accounted the best part of the mass; but the separate hard tears are externally of a ferruginous colour, and always preferred to the mass itself. Geoffroy distinguishes the former into *Galbanon en larmes*, and the latter into *Galbanon en pains*. Spielman mentions a liquid sort of Galbanum which is brought from Persia, "Prostat etiam interdum Galbanum liquidum ex Persia, consistentia terebinthinæ instructum, cui multæ fæces nigræ commixtæ sunt, tempore ad fundum secedentes, odorem resinæ, nunquam Galbani, habet."[f] Galbanum has a strong unpleasant smell, and a warm bitterish acrid taste; "like the other gummy resins it unites with water by trituration into a

[d] Genuina illa planta, quæ Galbanum officinarum fundit, nostri sæculi Botanicis nondum innotuit. *Ferulaceam* esse veteres docent omnes, quænam vero species sit, non constat. Parad. Bat. l. c.

Hermann is certainly a good authority; he was an intelligent physician, and practised many years in the East-Indies, about the latter end of the last century, and also at the Cape of Good Hope: his judgment therefore, as well as his fidelity, is at least equal to that of Plukenett's, which Linnæus prefers.

[e] Plures extare possunt stirpes, quæ succum Gàlbano similem stillant, ut de variis lachrymis quæ inter se conveniunt & è diversis stirpibus leguntur, nobis compertum est. Herm. l. c.

[f] Mat. Med. p. 560.

milky liquor, but does not perfectly dissolve, as some have reported, in water, vinegar, or wine. Rectified spirit takes up much more than either of these menstrua, but not the whole: the tincture is of a bright golden colour. A mixture of two parts of rectified spirit, and one of water, dissolves all but the impurities, which are commonly in considerable quantity.[g]"—In distillation with water, the oil separates and rises to the surface, in colour yellowish, in quantity about one-twentieth of the weight of the Galbanum. Newman observes, that the empyreumatic oil is of a blue colour, which changes in the air to a purple.

Galbanum, medicinally considered, may be said to hold a middle rank between Asafœtida and Ammoniacum; but its fetidness is very inconsiderable, especially when compared with the former, it is therefore accounted less antispasmodic, nor is it supposed to affect the bronchial glands so much as to have expectorant powers equal to those of the latter; it has the credit however of being more useful in hysterical disorders, and of promoting and correcting various secretions and uterine evacuations. Externally Galbanum has been applied to expedite the suppuration of inflammatory and indolent tumours, and medically as a warm stimulating plaster. It is an ingredient in the pilulæ e gummi, the emplastrum lithargyri cum gummi, of the London Pharm. and in the empl. ad clavos pedum of the Edin.

[g] Lewis's Mat. Med. by Dr. Aikin, p. 314.

The Galbanum colour was a prevailing fashion with the Romans.

> Reticulumque comis auratum ingentibus implet,
> Cœrulea indutus scutulata, aut galbana rasa; JUVENAL, Sat. 2, l. 96.

And Martial, speaking of an effeminate person, says, Galbanos habet mores. Lib. 1. Epig. 97.—Commentators differ about the colour of Galbana Rasa; we have described the Galbanum flower to be of a greenish yellow.

CARUM CARUI. COMMON CARAWAY.

SYNONYMA. Caruon. *Pharm. Lond.* & *Edinb.* Carum seu Careum. *Gerard. Emac. p.* 1034. Caros. *J. Bauh.* iii. *p.* 69. Cuminum pratense, Carui officinarum. *Bauh. Pin. p.* 158. Carum vulgare. *Park. Theat. p.* 910. *Camer. Epit.* 516. *Raii Hist. p.* 446. *Synop. p.* 213. *Morison Umbellifer. p.* 24. *Jacq. Flor. Aust.* 393. *Haller Stirp. Helv. n.* 789. *Withering. Bot. Arrang. p.* 312. *Smith. Brit.* 330. *Jacq. Aust.* 393. Καρος *Dioscorid.* Careum. *Plinii.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 365.

Ess.Gen.Ch. Fructus ovato-oblongus, striatus. *Involucr.* 1-phyllum. *Petala* carinata, inflexo-emarginata.

THE root is biennial, long, thick, white, and has a sharp sweetish taste:* the stalk is round, strong, channelled, branched, and rises to the height of two or three feet: the leaves are long, and subdivide into numerous pinnulæ or segments, which are narrow, pointed, of a deep green colour, and have a sweet taste:† the flowers grow in terminal umbels, generally consisting of ten radii, and furnished with both a general and a partial involucrum, each of which, in the specimen we have figured, consisted of four or five narrow segments: the corolla is composed of five roundish blunt petals, which are white, and curled inwards at the extremities: the five filaments are slender, about the length of the petals, and crowned with small round antheræ: the two styles are short, capillary, and furnished with simple stigmata: the seeds are two, naked, brown, bent, striated, and of an oblong shape.

* Parkinson says that these roots are better eating than parsneps.

† The leaves are said to afford an oil similar to that of the seeds.—Vide Lewis and others.

Carum Carui.

ve Philips & Fardon Sept. 1 1806

This plant produces its flowers in May and June. It is a native of Britain, and grows in meadows and low grounds; but the seeds of the cultivated plant are said to be larger, more oily, and of a more agreeable flavour than those of the wild plant, which are hot and acrid.

Caraway seeds are well known to have a pleasant spicy smell, and a warm aromatic taste, and on this account are used for various œconomical purposes.[a] "They give out the whole of their virtues, by moderate digestion, to rectified spirit. Watery infusions of these seeds are stronger in smell than the spirituous tincture, but weaker in taste: after repeated infusion, in fresh portions of water, they still give a considerable taste to spirit. In distillation, or evaporation, water elevates all the aromatic part of the Caraways: the remaining extract is almost insipid, and thus discovers, that in Caraways there is less, than in most of the other warm seeds of European growth, of a bitterish or ungrateful matter joined to the aromatic. Along with the aqueous fluid there arises in distillation a very considerable quantity, about one ounce from thirty, of essential oil; in taste hotter and more pungent than those obtained from most of our other warm seeds."[b]

The Caraway seeds are esteemed to be carminative, cordial, and stomachic, and recommended in dyspepsia, flatulencies, and other symptoms attending hysterical and hypochondrial disorders: they are also reported to be diuretic, and to promote the secretion of milk. They formerly entered many of the compositions in the Pharmacopœias; but are now less frequently employed. An essential oil, and a distilled spirit, are directed to be prepared from them by the London College.

[a] Semina Carui satis communiter adhibentur ad condiendum panem. Rustici nostrates esitant jusculum e pane seminibus Carui & cerevisia coctum. Distillatores seminibus Carui utuntur in rectificatione spiritus frumenti, ut ille acuatur oleo stellatitio carui, utpote calefaciente, unde spiritus fortior apparet, &c.

[b] Beaume obtained from six pounds of unbruised caraway seeds four ounces of essential oil as colourless as water.

CONIUM MACULATUM. COMMON HEMLOCK.

SYNONYMA. Cicuta. *Pharm. Lond.* & *Edinb.* *Hal. Stirp. Helv.* 766. Cicuta major. *Bauh. Pin.* 160. Cicuta vulgaris major, *Park.* 933. Cicutaria vulgaris. *Clus. Hist.* 2. 200. Cicuta. *Gerard,* 1061. *Raii Hist.* vol. 1. 451. *Synop.* p. 215. *Stoerck. Suppl.* Conium Maculatum. *Scop. Flor. Carn.* p. 207. *Bergius Mat. Med.* 192. *Curtis Flor. Lond.* *Withering Bot. Arrang.* 277. *Relhan Flor. Cant.* 112. *Smith Brit.* 302. Κωνειον *Græcor.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 336.

Ess. Gen. Ch. *Involucella* dimidiata, subtriphylla. *Fructus* subglobosus, 5-striatus, utrinque crenatus.

Sp. Ch. C. seminibus striatis.

THE root is biennial, tapering, sometimes forked, eight or ten inches long, and about the thickness of a finger: the stalk is five or six feet high, round, shining, beset with brown and purplish specks; towards the top branched and striated; near the bottom about three inches in circumference, and covered with a bluish exudation, appearing like a fine powder: the lower leaves are very large, tripinnated, of a shining green colour, standing upon long, striated, concave footstalks, which proceed from the joints of the stem; the upper and smaller leaves are bipinnated, and placed at the divisions of the branches: the flowers are produced in umbels, which are both universal and partial, and composed of several striated radii. The universal involucrum ‡ consists of five or seven leaves, these are lanceolated, whitish at the margin, and bent

‡ The calyx of umbelliferous plants is termed involucrum, and may be universal, partial, or proper, according as it is placed at the universal umbel, partial umbel, or flower.

Geranium maculatum

Published by Phillips & Fardon, Sep.t 1.st 1806.

downwards; the partial involucrum is composed of three or four leaves, which are placed on the outer side of the radial stalk; the petals are five, oval, white, and curl inwards at their points; the stamina are five, white, about the length of the corolla, and crowned with whitish antheræ; the styles are two, filiform, inclining outwards, and terminated by round stigmata; the fruit is oval, striated, consisting of two irregularly hemispherical striated brownish seeds. This plant flowers in July, and is commonly found near dunghills and waste grounds.[a] It has a peculiar faint fetid smell, and a slight aromatic herbaceous, and somewhat nauseous taste.[b]

The common resemblance of most of the umbelliferous plants leads us to suspect, that they were very imperfectly distinguished by the ancients; for though the botanical description of the Κωνειον, given by Dioscorides, applies in great measure to this plant,[c] yet it must be considered, that his description is without discrimination, and is, with a few exceptions, equally applicable to all the genera of plants composing the natural order of *Umbelliferæ:* so that the accounts given of Cicuta by ancient writers, should be admitted with great caution.[d] Whether this species of hemlock was the poison usually administered at the Athenian executions, and which

[a] "The Hemlock is obviously distinguished from our other umbelliferous plants by its *large* and *spotted stalk*, by the dark and *shining green colour of its bottom leaves*, and particularly by their *disagreeable smell* when bruised, and which, according to Stöerck, resembles that of mice." *Curt. Flor. Lond.* The Chærophyllum bulbosum has a spotted stem, but its swelled joints, and rough seeds, distinguish it from the hemlock.

[b] Bergius. M. M. 194. Stoerck says, that the milky juice of the root is so extremely acrid and deleterious that a small drop or two of it being applied to his tongue produced great pain and swelling of that organ, and for some time deprived him of the power of speech.——In answer to this see note (g).

[c] Haller refers it to the Cicuta virosa. [d] The word Cicuta, with the ancients, seemed not indicative of any particular species of plant, but of poisonous vegetables in general. Vide Plinii Hist. Nat. L. 14. c. 5. L. 25. c. 13.

deprived Athens of those great characters, Socrates and Phocion, we are at a loss to determine;[e] but that it is a deleterious poison there cannot be a doubt,[f] though some circumstances render it probable that it is less powerfully so than is generally imagined.[g]

[e] For further information on this subject, consult Steger Diss. de Cicuta Atheniensium. Ehrhart Diss. de Cicuta. Joannis Viventii de Cicuta comment.

[f] Of the most decisive instances of its fatal effects, which have occurred in this country, is that related by the late Dr. Watson in the Phil. Transact. in which it is fully ascertained by him, that two Dutch soldiers, at Waltham Abby, were killed in a very short time by eating this plant. Other proofs of this sort are given by Heins, (Pharm. rat. p. 370) which happened to some boys at Dresden. Saml. fur Geschichte von Ober. Sachs. III. p. 221. Scaliger, Subtil. Exerc. 152. Amatus Act. Cur. 98. Cent. V. See also the cases mentioned by Wolf in Comment. lit. Nor. anno 1740 and 1749.—Wepfer. Cicut. p. 71. 312. Brassavola Examen. omn. simp. We may also notice the following from Theophrastus, (L. IX. c. 17.) Thrasyas Mantineensis remedium a se inventum fuisse gloriabatur, quod absque dolore vitam abrumperet, ex Cicuta & Papaveris succo mistum, &c. vide Hal. Stirp. Helv. p. 338.—to which work we are obliged for many of the facts just recited. Although sheep and some other animals eat this plant with impunity, yet to many it is strongly poisonous. Three spoonfuls of the juice killed a cat in less than a quarter of an hour. Rozier, Tableau, tom i. 1773. Upon opening those animals to which it proved fatal, inflammation of the stomach and intestines was discovered. Harder apiar. Obs. 24 & 25. Wepfer cicut. p. 334. And we may here remark that vinegar has been found the most useful in obviating the effects of this poison; and that by macerating or boiling this plant in vinegar, it becomes totally inert. Lindestolpe de venenis.

[g] Respecting the root of Hemlock, we have the following instances, shewing unequivocally that it does not possess any noxious power whatever. Ray relates, (Phil. Trans. XIX. vol. p. 634.) that the skilful herbalist, Mr. Petiver, ate half an ounce of the root of Hemlock, and that Mr. Henly, in the presence of Mr. Petiver, swallowed three or four ounces, without experiencing any remarkable effect; and these facts seem confirmed by the later experiments of Mr. Alcorne and Mr. Timothy Lane, neither of whom perceived any sensible effect on eating this root. Mr. Curtis says, Mr. Alcorne "assures me, that he has tried this in every season of the year, and in most parts of our island, without finding any material difference: and Mr. T. Lane informs me, that he also, with great caution, made some experiments of the like kind, and in a short time found he could eat a considerable part of a root, without any inconvenience; after this he had some

The symptoms produced by Hemlock, when taken in immoderate doses, are related by various authors, the principal of which have been collected by Haller and others, and stated in the following words: "Intus sumpta facit anxietates, cardialgias, vomitus, appetitum prostratum diuturnum, convulsiones, cæcitatem, sopores," (l. c.) "vertiginem, dementiam, mortemque ipsam." Murray App. Med. vol. 1. p. 215.—Cicuta seems to have been, both by the Greek and Arabian physicians, very generally employed as an external remedy for tumours, ulcers, and cutaneous eruptions; it was also thought to have the peculiar power "frangere stimulum venereum;"[h] and this circumstance is the more remarkable, as Stöerck, Bergius, and others, recommend its internal use for complaints of a contrary nature, and adduce proofs of its aphrodisiacal powers.[i]

Baron Stöerck was undoubtedly the first physician, who brought Hemlock into repute as a medicine of extraordinary efficacy, by his

large roots boiled, and found them as agreeable eating at dinner with meat as carrots, which they in taste somewhat resembled; and as far as his experience, joined with that of others, informed him, the roots might be cultivated in gardens, and either eaten raw like celery, or boiled as parseneps or carrots." (Flor. Lond.) And Murray observes, Non tamen tantopere esse Conium reformidandum, ut quidam existimant, patet inde, quod etiam infantibus tenellis impune exhibitum, nec fœtum affecerit sub matris graviditate datum, nec gravidam matrem, nec detrimentum attulerit largior et per protractius tempus, ad drachmas sex extracti usque supraque intra nychthemerum, usus. Stöerck, vide Murray, Ap. Med. vol. 1. p. 216.—Quin & exstant exempla vetustiora, ingestam herbam vel succum majori adeo quantitate subinde tam homines quam bruta impune tulisse. Sic Plinius caulem viridem comedi, Sextus Empericus feminam producit, quæ drachmam unam succi absque noxa cepit. Murray, l. c.

[h] Aretæus de Morb. Acut. L. 2. c. 11. Et incrementa mammarum & testium cohibere, *Anaxilaus & Dioscorides.*

[i] Impotentiam virilem sub usu Conii curatam observavi, in viro quodam plusquam quadrigenario, qui omnem erectionem penis perdiderat, postinde tamen plures liberos procreavit. Bergius Mat. Med. p. 195.—Dr. Cullen, however, never discovered its effects in this way.

publication in 1760; and his claim to this distinction is the stronger, as his facts only have since been able to support its reputation to any very considerable extent; nay it never succeeded so well as when under his own direction, or confined to the neighbourhood in which he resided,[k] and to the practice of those physicians with whom he lived in habits of intimacy and friendship.* To enumerate all the diseases in which he sets forth the powerful efficacy of Cicuta, in four successive books on the subject, would be to give a catalogue of most of the chronic diseases with which human nature is afflicted. And Bergius, though he experienced no advantage by employing it in true cancerous affections, still recommends its use in "Ulcera sordida & siphilitica, Scabies, Morbi cutis, Gonorrhoea, Leucorhœa, Phthisis, Impotentia virilis, Rheumatismus chronicus, Scrophula;" and he considers its *Virtus* to be "narcotica, resolvens, suppurationem promovens, diuretica." To estimate with precision the medicinal utility of Hemlock is no very easy task. Had Dr. Stöerck's publications upon this subject contained but few and less extraordinary proofs of its good effects in certain obstinate and painful diseases, the virtues of Cicuta might have been held in greater estimation than they actually are:[l] while those authors, who have as generally condemned this medicine as uniformly useless or dangerous, seem to have done it equal

[k] The general inefficacy of Hemlock experienced in this country, induced physicians at first to suppose that this plant, in the environs of Vienna and Berlin, differed widely from ours, and this being stated to Dr. Stöerck, he sent a quantity of the extract, prepared by himself, to London, but this was found to be equally unsuccessful, and to differ in no respect from the English extract.

* Collin, Locher, Quarin, Leber, &c.

[l] That it should be of some estimation in many of the diseases, in which it is recommended by Stöerck, appears from the numerous authorities cited by Murray, who concludes with these words: "Et sic quidem in multis pertinacissimis morbis liquandi spissa, obstructa reserandi et sanguinem depurandi, efficacia auxilio fuit." l. c.

injustice.[m] Although we have not in this country any direct facts, like those mentioned by Stöerck, proving that inveterate scirrhuses, cancers, ulcers, and many other diseases hitherto deemed irremediable, were completely cured by the Cicuta; we have, however, the testimonies of several eminent physicians, shewing that some complaints, which had resisted other powerful medicines, yielded to Hemlock;[n] and that even some disorders, which, if not really cancerous, were at least suspected to be of that tendency, were greatly benefited by this remedy. In chronic rheumatisms, some glandular swellings, and in various fixed and periodical pains, the cicuta is now very generally employed; and from daily experience, it appears in such cases to be a very efficacious remedy. It has also been found of singular use in the chincough.[o] We cannot therefore but consider this plant an important acquisition to the Materia Medica. Externally the leaves of hemlock have been variously applied with advantage to ulcers, indurated tumours, and gangrenes.

Much has been said respecting the variable nature of this plant, the time of collecting it, the part which ought to be preferred, and the best manner of preparing it for medical use; but as these circumstances seem only to produce a mere variation in the strength of the medicine, we conceive such pharmaceutical inquiries to be

[m] Vide Andree's Observations on Stöerck's Pamphlet, *anno* 1761. Lange Diss. dubia Cicutæ vexata. *anno* 1764. De Haen Epist. de cicuta, *anno* 1765. Bierken (*Tal om Kreaftskador*) who, with Bergius, says, that in all cancers it does mischief.

[n] Among those we may mention the late Drs. Fothergill and Rutty. Vide Med. Obs. & Inquir. vol. 3.—also in the 5th vol. the former gives an account of painful affections of the face, which he attributes to cancerous acrimony, removed by the use of cicuta.—Dr. Cullen says, "I have found it in several cases (of cancer) to relieve the pains and mend the quality of the matter proceeding from the sore, and even to make a considerable approach towards healing it." Mat. Med. vol. 2. 266. Several others instance its good effects in glandular diseases, and Mr. Hunter commends its use in syphilis. [o] Dr. Butter on the Chincough.

of very little importance, requiring only a proportionate adjustment of the dose, which, under the direction of a skilful practitioner, will always be regulated by its effects only, beginning with a few grains of the extract or powder, and increasing it daily[p] till a slight vertigo or other symptoms manifest the sufficiency of the dose: and unless this method has been pursued, the medicine cannot be said to have had an efficient trial. "An extract from the seeds is said to produce giddiness sooner than that from the leaves. Hence, while both the London and Edinburgh Colleges have given a place to the succus spissatus cicutæ, into the pharmacopœia of the latter an extractum seminum cicutæ is also introduced."[q]

[p] This should also be attended to on recommencing with a fresh parcel of the medicine, as it may differ very materially from the former preparation used; of this Dr. Cullen gives a remarkable instance, strongly evincing the necessity of such a precaution, &c. [q] Duncan's Edin. New Dis.

The powder of the dried leaves of Hemlock seems to act with more certainty, and is more to be depended upon than the extract; great caution however is required in drying and preserving these leaves. Dr. Withering recommends the following method, which appears to us extremely proper: "Let the leaves be gathered about the end of June, when the plant is in flower. Pick off the little leaves, and throw away the leaf stalks. Dry these selected little leaves in a hot sun, or in a tin dripping pan or pewter dish before the fire. Preserve them in bags made of strong brown paper, or powder them and keep the powder in glass vials, in a drawer or something that will exclude the light, for the light soon dissipates the beautiful green colour, and with its colour the medicine loses its efficacy. From 15 to 25 grains of this powder may be taken twice or thrice a day. I have found it particularly useful in chronic rheumatisms, and also in many of those diseases which are usually supposed to arise from acrimony. The nature of this book does not allow minute details of the virtues of plants, but I can assure the medical practitioner, that this is well worth his attention." Bot. Arr. 2d Ed. p. 280.

Ferula Asa foetida

Published by Phillips & Fardon, Sept. 1st 1808.

FERULA ASSAFŒTIDA. ASAFŒTIDA GIGANTIC FENNEL.

SYNONYMA. Planta umbellifera, tripedalis, erecta, ramosa, glauca, flore luteo, *Hope, Phil. Trans. vol. 75, p.* 36. Asafœtida umbellifera Levestico affinis, foliis instar Pœoniæ ramosis; caule pleno maximo; semine foliaceo nudo solitario; Brancæ ursinæ‡ vel pastinacæ simili; radice asam fœtidam fundente. *Kaempfer Amœnit. Exot. p.* 535. Gummi-resina, Asafœtida, *Pharm. Lond. & Edin.* Hingiseh *Persarum.* Altiht *Arabum,* et a quibusdam creditur σιλφιον vel οπος σιλφιυ *Dioscor. Theophrast. Hippoc. &c.* Laser et Laserpitium, *Latinorum.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 343.

Ess. Gen. Ch. Fructus ovalis, compresso-planus, striis utrinque 3.

Spec. Ch. F. Foliis alternatim sinuatis obtusis.

LINNÆUS has given the specific character according to Kaempfer's representation of the Asafœtida plant, which differs in many respects from the figure here annexed, which is taken from that communicated to the Royal Society by the late Dr. Hope, and published in the 75th volume of the Philosophical Transactions: and this difference being so considerable as to indicate more than a mere botanical variety, Sir Joseph Banks thinks it probable that Asafœtida may be produced from different species of the ferula. Dr. Hope was undoubtedly the first who cultivated the Asafœtida plant in Britain, or perhaps in Europe, and his accurate description of it, as it grew in the botanical garden near Edinburgh, in the

‡ Branca ursina is the Heracleum Sphondylium of Linnæus.

year 1784, is inserted below.* Though Asafœtida was formerly in

* PLANTA umbellifera, tripedalis, erecta, ramosa, glauca, flore luteo.

Radix perennis.

Folia radicalia sex, procumbentia, trilobo-ovata, multoties pinnatim divisa; foliolis incisis, subacutis, subdecurrentibus; petiolo communi superne plano, linea elevata longitudinaliter per medium decurrente.

Caulis bipedalis, erectus, teretiusculus, annuus, leviter striatus, glaber, nudus præter unam circa medium foliorum imperfectorum conjugationem; petiolo membranaceo concavo.

Rami nudi, patuli; quorum tres inferi, alterni, sustinentur singuli folii imperfecti petiolo membranaceo concavo.

Quatuor intermedii verticillati sunt. Supremi ex apice caulis octo, quorum interni erecti.

Omnes hi rami summitate sustinent umbellam compositam sessilem terminalem, et præterea 3—6 ramulos externe positos, umbellas compositas ferentes.

Hoc modo, rami inferiores sustinent 5, raro 6 ramulos; intermedii 3 vel 4; superiores 1 et 2.

CAL. *Umbella universalis* radiis 20—30 constat.

——— *partialis* flosculis subsessilibus 10—20.

Umbella composita sessilis convexo-plana.

——— ——— pedunculata hæmispherica.

Involucrum universale nullum.

——— *partiale* nullum.

Perianthium proprium vix notabile.

COR. *universalis* uniformis.

Flosculi umbellæ sessilis fertiles.

——— ——— pedunculatæ plerumque abortiunt.

propria petalis quinque æqualibus, planis, ovatis: primo patulis, dein reflexis, apice ascendente.

STAM. *Filamenta* 5, subulata, corolla longiora, incurvata. *Antheræ* subrotundæ.

PIST. *Germen* turbinatum, inferum.

Styli duo, reflexi.

Stigmata apice incrassata.

PER. nullum: fructus oblongus, plano-compressus, utrinque 3 lineis elevatis notatus est.

SEM. duo, oblonga, magna, utrinque plana, 3 lineis elevatis notata.

Planta odorem alliaceum diffundit. Folia, rami, pedunculi, radix, truncus, secti succum fundunt lacteum, sapore et odore Asæ fœtidæ.

great estimation both as a medicine and a sauce, yet we had no particular account of the plant till Kaempfer returned from his travels in Asia, and published his Amœnitates Exoticæ in the beginning of the present century. As he saw the plant growing, and describes it from his own observation, we have collected the following general description from the history he has given:

It is a native of Persia, the root is perennial, tapering, ponderous, and increases to the size of a man's arm or leg, covered with a blackish coloured bark, and near the top beset with many strong rigid fibres; the internal substance is white, fleshy, and abounds with a thick milky juice, yielding an excessively strong fetid alliaceous smell; the stalk is simple, erect, straight, round, smooth, striated, herbaceous, about six or seven inches in circumference at the base, and rises luxuriantly to the height of two or three yards, or higher;[a] radical leaves six or seven, near two feet long, bipinnated, pinnulæ alternate, smooth, variously sinuated, lobed, and sometimes lance-shaped, of a deep green colour, and fetid smell; the umbels are compound, plano-convex, terminal, and consist of many radii: the seeds are oval, flat, foliaceous, of a reddish brown colour, rough, marked with three longitudinal lines, have a porraceous smell, and a sharp bitter taste: the petals Kaempfer did not see, but supposes them in number five, minute, and white.

This plant is said to vary much according to the situation and soil in which it grows, not only in the shape of the leaves, but in the peculiar nauseous quality of the juice which impregnates them; this becomes so far altered that they are sometimes eaten by the goats.

Asafœtida is the concrete juice of the root of this plant, which is procured in the following manner on the mountains in the provinces of Chorasaan and Laar in Persia. At that season of the year when the leaves begin to decay, the oldest plants are selected

[a] *Caulis*, in orgyjæ, sesquiorgyjæ, vel majorem longitudinem luxuriosè exsurgens, crassitie in imo quanta manûs complexum superat.

for[b] this purpose. First the firm earth which encompasses the root, is rendered light by digging, and part of it cleared away, so as to leave a portion of the upper part of the root above the ground; the leaves and stalk are then twisted off and used with other vegetables for a covering to screen it from the sun, and upon this covering a stone is placed to prevent the winds from blowing it down; in this state the root is left for forty days, after which the covering is removed, and the top of the root cut off transversely; it is then screened again from the sun for forty-eight hours, which is thought a sufficient time for the juice to exude upon the wounded surface of the root, when the juice is scraped off by a proper instrument, and exposed to the sun to harden: this being done, a second transverse section of the root is made, but no thicker than is necessary to remove the remaining superficial concretions which would otherwise obstruct the farther effusion of fresh juice; the screening is then again employed for forty-eight hours, and the juice obtained a second time, as before mentioned. In this way the Asafœtida is eight times repeatedly collected from each root; observing, however, that after every third section, the root is always suffered to remain unmolested for eight or ten days, in order that it may recover a sufficient stock of juice. Thus, to exhaust one root of its juice, computing from the first time of collecting it to the last, a period of nearly six weeks is required; when the root is abandoned, and soon perishes.

The whole of this business is conducted by the peasants who live in the neighbourhood of the mountains where the drug is procured; and as they collect the juice from a number of roots at the same time, and expose it in one common place to harden, the sun soon gives it that consistence and appearance in which it is imported into Europe.

Asafœtida has a bitter, acrid, pungent taste, and is well known by its peculiar nauseous fetid smell, the strength of which is the surest test of its goodness; this odour is extremely volatile, and of

[b] Radix quadriennio minor parum lactescit & nunquam secatur.

course the drug loses much of its efficacy by keeping. According to Kaempfer's account, the juice is infinitely more odorate when recent than when in the state brought to us: Affirmare ausim, unam drachmam recens effusam, majorem spargere fœtorem, quàm centum libras vetustioris quem siccum venundant aromatarii nostrates. "We have this drug in large irregular masses of a heterogeneous appearance, composed of various shining little lumps or grains, which are partly whitish, partly of a brownish or reddish, and partly of a violet hue. Those masses are accounted the best which are clear, of a pale reddish colour, and variegated with a great number of fine white tears. Asafœtida is composed of a gummy and a resinous substance, the first in largest quantity. Its smell and taste reside in the resin, which is readily dissolved and extracted by pure spirit, and, in a great part, along with the gummy matter, by water."[c]

Asafœtida is a medicine in very general use, and is certainly a more efficacious remedy than any of the other fetid gums: it is most commonly employed in hysteria, hypochondriasis, some symptoms of dyspepsia, flatulent colics, and in most of those diseases termed nervous: but its chief use is derived from its antispasmodic effects; and it is thought to be the most powerful remedy we possess for those peculiar convulsive and spasmodic affections which often recur in the first of these diseases; both taken into the stomach and in the way of enema. It is also recommended as an emmenagogue, anthelminthic, expectorant,[d] antiasthmatic, and anodyne. Where we wish it to act immediately as an antispasmodic, it should be used in a fluid form, as that of tincture.

In the London Pharmacopœia, a spirituous tincture of it is directed, and it is also an ingredient in the Pilulæ e Gummi. In the Edinburgh Pharmacopœia, Asafœtida is ordered in the Tinctura fuliginis, in the pilulæ gummosæ, and in the form of tincture with the Spt. Sal. ammon. vinos.

[c] Lewis's Mat. Med.

[d] Dr. Cullen prefers it to the Gum Ammon. as an expectorant. Asafœtida should therefore have a double advantage in spasmodic asthmas.

IMPERATORIA OSTRUTHIUM. COMMON MASTERWORT.

SYNONYMA. Imperatoria. *Pharm. Edinb. J. Bauh.* iii. 137. *Gerard Emac.* 1001. *Haller. Stirp. Helv.* No. 805. Imperatoria major. *Bauh. Pin.* 156. Imperatoria sive Astrantia vulgaris. *Park. Theat.* 942. Common Masterwort, *by some erroneously* Pellitory of Spain. *Raii Hist.* 436. Magistrantia. *Camer. Epit.* 592. Imperatoria Ostruthium. *Withering. Bot. Arr. Lightfoot. Flor. Scot. Smith. Brit.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 356.

Ess. Ch. ***Fructus*** subrotundus, compressus, medio gibbus, margine cinctus. ***Petala*** inflexo-marginata.

Imperatoria *Ostruthium.* L. Sp. Pl. 371.

THIS is the only Imperatoria described by Linnæus. The root is perennial, large, fleshy, succulent, round, tapering, rough, articulated, externally brown, internally whitish, creeping, and sends off many lateral fibres: the stalk is thick, striated, round, jointed, and rises about two feet in height: the leaves are compound, and proceed alternately from long footstalks, which supply the stalk with a sheathy covering at each articulation; the simple leaves are ovato-elliptical, pointed, irregularly serrated, and placed in treble ternaries, and the terminal leaf is commonly cut into three lobes: the general umbels are large, flat, and terminal; the partial umbel convex and unequal; there is no general involucrum; the partial involucrum consists of one or two slender leaves, nearly of the length of the radii; each flower is composed of five oval petals, which are of equal size, white, notched, and having their points bent inwards; the five filaments are tapering, white, erect, and longer than the corolla; the antheræ are double; the germen

Imperatoria Ostruthium.

Published by Phillips & Fardon Sept 1 1806

is roundish, striated, truncated, above white, beneath greenish: the two styles are tapering, spreading, and a little shorter than the stamina; the stigmata are simple and obtuse. The flowers appear in May and July.

Masterwort may be considered as a native of Scotland, Mr. Lightfoot having found it growing in several places on the banks of the Clyde. It is frequently cultivated in our gardens; but the root, which is the part directed for medical use, is greatly inferior to that produced in the South of Europe, especially in mountainous situations: hence the shops are generally supplied with it from the Alps and Pyrenees.

This root has a fragrant smell, and a bitterish pungent taste, leaving a glowing warmth in the mouth for some time after it has been chewed. Its virtues are extracted both by watery and spirituous menstrua, but more completely by the latter.

This plant, as its name [a] imports, was formerly thought to be of singular efficacy, and was preferred to most of the other aromatics, for its alexipharmic and sudorific powers. In some diseases [b] it was employed with so much success as to be distinguished by the name of "divinum remedium." [c] At present, however, physicians consider this root merely as an aromatic, and it is of course superseded by many of that class of a superior character. Half a dram of the root in substance, and one dram of it in infusion, is the dose directed.

[a] "Imperatoria ob raras & præstantes facultates nominata fuit." Vide Bauh. Pin. s. c.

[b] The diseases in which it has been chiefly recommended, are Hysteria, Hydrops, Colica, Paralysis, Vermes, Febres intermittentes. It has been also used as a sialagogue.

[c] C. Hoffman. Officin. L. 2. c. 116.

APIUM PETROSELINUM. COMMON PARSLEY.

SYNONYMA. Petroselinum. *Pharm. Lond. & Edinb.* Apium hortense vulgo Petroselinum. *Bauh. Pin. p.* 153. Petroselinum vulgare. *Park. Theat. p.* 922. Apium hortense. *Gerard. Emac. p.* 1013. *Raii. Hist. p.* 1448.

α Apium sativum.	*Riv. pent.* 88.	Common Parsley.
β Apium crispum.	*Riv. pent.* 90.	Curled Parsley.
γ Apium radice esculenta.	*Hort. Ups.* 67.	Large rooted Parsley.

Aiton's Hort. Kew.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 367.

Ess. Gen. Ch. *Fructus* ovatus, striatus. *Involucrum* 1-phyllum. *Petala* æqualia.

Sp. Ch. A. foliolis caulinis linearibus, involucellis minutis.

THE root is biennial, long, white, and beset with fibres: the stem is upright, round, scored, branched, jointed, and usually rises two feet in height: the radical leaves are with footstalks, compound, pinnated in ternaries: the leafits are smooth, veined, divided into three lobes, and notched at the margin: the leaves of the stalk proceed from the vaginal sheaths at the joints, and have the leafits cut into narrow linear entire segments: the flowers are small, of a yellow colour, and terminate the stem and branches in umbels composed of general and partial radii; the former are about ten in number, and the latter twenty in each umbel; it seldom has a general involucrum, but the partial involucrum consists of six or eight leafits, unequal, pointed, spreading, and shorter than the umbel: the corolla consists of five oval petals, which have their points inflected: the filaments are five, spreading, slender, twice the length of the corolla, and crowned with roundish

Apium Petroselinum

Published by Phillips & Fardon, Sept.r 2.nd 1806.

antheræ: the germen is oval, striated, and supports two short reflected styles, terminated with obtuse stigmata: the seeds are of a dark green colour, oblong, angular, striated, flat on one side, and convex on the other. It is a native of Sardinia, and flowers in June and July.

All the varieties of Parsley have been long very generally cultivated in England,[a] and its frequent use for culinary purposes renders it more familiar than most of the plants which our kitchen gardens produce. Both the roots and seeds of Parsley are directed by the London College for medicinal use; the former have a sweetish taste, accompanied with a slight warmth or flavour, somewhat resembling that of a carrot: the latter are in taste warmer, and more aromatic than any other part of the plant, and also manifest considerable bitterness. In distillation, three pounds yielded above an ounce of essential oil, a great part of which sunk in the fluid. They give out little of their qualities by infusion in watery menstrua, but readily impart all their virtue to rectified spirit. The roots, by distillation in water, were found to yield a very inconsiderable portion of essential oil, not above two or three drams from as many hundred pounds of the root.[b] These roots are said to be aperient and diuretic, and have been employed in apozems, to relieve nephritic pains, and obstructions of urine.[c] In this way they have been prescribed by Dr. Cullen without producing any diuretic effect, and this he thinks may in some measure be attributed to the loss of their active matter, which they sustain in boiling.[d] The seeds, like those of many other umbelliferous plants, possess a share of aromatic and carminative power; but as this is inconsiderable they are now seldom employed.‡ The

[a] Cultivated in 1551. *Turn. Herb. part.* 1. *sign.* D. iiii. Vide *Aiton's Hort. Kew.* [b] Lewis, *Mat. Med. p.* 499. [c] See Hoffman and others. [d] *Mat. Med. p.* 159.

‡ Externally they have been advantageously used for destroying cutaneous insects in children. Vide Con. Mich. Valentini *Act. Nat. Cur. vol. i. p.* 285. and Rosenstein *Barns. junkd. Ed.* 3. *p.* 533.

bruised leaves have been successfully used as a decutient poultice to various kinds of tumours.[e] Although Parsley is so commonly used at table, it is remarkable that facts have been adduced to prove that in some constitutions it occasions epilepsy, or at least aggravates the epileptic fits in those who are subject to this disease.[f] It has been supposed also to produce inflammation in the eyes.[g]

[e] We are told by Lange, (*Misc. verit. med. p.* 26) that this application has succeeded in scirrhous tumours where Cicuta and Mercury had failed.

[f] Hannemannus, in *Eph. Nat. Cur. Dec.* 3. *A.* 3. *p.* 78. And Marriotte in *Journ. de Med. t.* 23. *p.* 545.

[g] See *Boyle's Works, t* 1. *p.* 503. Alston's *Lect. on M. M. vol. i. p.* 381. And cited by Murray.

ERYNGIUM* MARITIMUM. SEA ERYNGO, or HOLLY.

SYNONYMA. Eryngium. *Pharm. Lond. Bauh. Pin. p.* 386. Eryngium marinum. *Gerard. Emac. p.* 1162. *Park. Theat. p.* 986. *J. Bauh. Hist. vol. iii. p.* 86. *Raii Hist. p.* 384. *Synop. p.* 222. Eryngium maritimum. *Bauh. Pinax. p.* 386. *Hudson. Flor. Ang. Smith Brit. Withering. Bot. Arrang. p.* 264. *Flor. Dan. tab.* 875.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 324.

* Græci Philosophi Eryngium, quasi ἐρυγμὸς, id est ructum, dictum putant, quòd capræ quæ morsu surculum Eryngii præciderint, vel deglutiverint, cunctum gregem pone sequentem quasi stupore attonitum sistunt, donec Eryngium ructu rejecerint. *C. Bauh. l. c.*

Eryngium maritimum

Published by Phillips, & Fardon, Oct.r 1st. 1806.

Ess. Gen. Ch. *Flores* capitati. *Receptaculum* paleaceum.

Sp. Ch. E. foliis radicalibus subrotundis plicatis spinosis, capitulis pedunculatis, paleis tricuspidatis.

THE root is perennial, long, round, tough, externally of a brown colour, internally whitish: the stalk is thick, fleshy, round, striated, white, branched, and rises from one to two feet in height: the leaves, which grow from the root, are roundish, plaited, trifid, firm, spinous like those of the holly, marked with white reticulated veins, and of a very pale bluish green colour; those proceeding from the stalk are sessile, and surround the branches: the flowers are small, of a blue colour, and terminate the branches in round heads: the common receptacle is conical, and supplied with *paleæ*, which separate the florets: the involucrum of the receptacle is composed of many pointed leaves, which are longer than the florets: the calyx consists of five erect sharp leaves, placed above the germen: the corolla is composed of five oblong petals, with their points turned inwards: the filaments are five, slender, upright, longer than the corolla, and supplied with oblong antheræ: the two styles are filiform, and furnished with simple stigmata: the germen is beset with short hairs, and stands beneath the corolla: the fruit is two oblong seeds, connected together. It grows abundantly on the sea coasts, and flowers from July till October.

In the Materia Medica of Linnæus, and in almost all the foreign pharmacopœias, the Eryngium campestre is considered to be the officinal plant: Geoffroy, however, has observed that the E. maritimum is by many thought to be a more powerful medicine, and Simon Paulli[a] gives it the preference; but Boerhaave[b] attributes the same virtues to both, and indeed it seems of little importance which is preferred. Eryngo is supposed to be the ηρυγγιον of Dioscorides,[c]

[a] *Quadrip. p.* 324. [b] *Hist. pl. T. i. p.* 194.

[c] *Lib.* 3. *c.* 24. He recommends it ad menses obstructos, tormina, inflationes hepaticos, venena, venenatos morsus, episthotonicos, & comitiales.

who with other ancient writers speak highly of its medicinal efficacy. The root, which is the part directed for medicinal use, has no peculiar smell, but to the taste it manifests a grateful sweetness, and on being chewed for some time it discovers a light aromatic warmth or pungency. By Boerhaave this was esteemed the principal of the aperient roots, and he usually prescribed it as a diuretic and antiscorbutic:[d] it has likewise been celebrated for its aphrodisiac powers.[e] But this and the other effects ascribed to Eyrngo seem now to obtain very little credit.

[d] Vide, *l. c.*

[e] "Non male tum Graiis florens Eryngus in hortis
"Quæritur: hunc gremio portet si nupta virentem
"Nunquam inconcessos conjux meditabitur ignes.
Rapinus in Boer. Hist.

The root is frequently candied, or made into a sweet meat.
The young flowering shoots boiled, have the flavour of asparagus. *Lin. Flor. Suec.*

PASTINACA OPOPANAX. OPOPANAX, or ROUGH PARSNEP.

Opopanax, *gummi-resina. Pharm. Lond.*

SYNONYMA. Panax costinum. *Bauh. Pin. p.* 156. Panax Heracleum. *Morris Hist. t. iii. p.* 315. *Boccone, Journ. des Scav.* 1676. *p.* 28. *Gerard Emac. p.* 1003. *Raii Hist. p.* 410. Heracleum alterum, sive peregrinum Dodonæi. *Park. Theat. p.* 948. Pastinaca sylvestris altissima. *Tourn. Inst. p.* 319. P. Opopanax. *Gouan, Illustr.* 19. *t.* 13, 14.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 362.

Ess. Gen. Ch. *Fructus* ellipticus, compresso-planus. *Petala* involuta, integra.

Sp. Ch. P. foliis pinnatis: foliolis basi antica excisis, *Syst. Veg.*

Pastinaca Opopanax

Published by Phillips, & Fardon, Oct.r 1.st 1806.

THE root is perennial, thick, fleshy, tapering like the garden parsnep: the stalk is strong, branched, rough towards the bottom, and rises seven or eight feet in height: the leaves are pinnated, consisting of several pairs of pinnæ, which are oblong, serrated, veined, and towards the base appear unformed on the upper side: the flowers are small, of a yellowish colour, and terminate the stem and branches in flat umbels: the general and partial umbels are composed of many radii: the general and partial involucra are commonly both wanting: all the florets are fertile, and have an uniform appearance: the petals are five, lance-shaped, and curled inwards: the five filaments are spreading, curved, longer than the petals, and furnished with roundish antheræ: the germen is placed below the corolla, supporting two reflexed styles, which are supplied with blunt stigmata: the fruit is elliptical, compressed, divided into two parts, containing two flat seeds, encompassed with a narrow border. It is a native of the South of Europe, and flowers in June and July.

This species of Parsnep was cultivated in 1731 by Mr. P. Miller, who observes that its "roots are large, sweet, and accounted very nourishing," therefore recommended for cultivation in kitchen-gardens.[a] It bears the cold of our climate very well, and commonly maturates its seeds, and its juice here manifests some of those qualities which are discovered in the officinal opopanax;[b] but it is only in the warm regions of the East, and where this plant is a native, that its juice concretes into this gummy resinous drug. Opopanax is obtained by means of incisions made at the bottom of the stalk of the plant, from whence the juice gradually exudes,[c] and by undergoing spontaneous concretion, assumes the appearance under which we have it imported from Turkey and the East-Indies,

[a] See his *Dict.*

[b] Alston says, "with regard to these plants growing here, I venture to say, that, if their juice be not the opopanax, it is very like it." *M. M. v. ii. p.* 443.

[c] We find no account of the manner of obtaining this drug since that mentioned by Dodonaeus, *Pempt.* (p. 309.) & Boccone, (l. c)

viz. "sometimes in little round drops or tears, more commonly in irregular lumps, of a reddish yellow colour, on the outside with specks of white, internally of a paler colour, and frequently variegated with large white pieces."

"This gummy-resin has a strong disagreeable smell, and a bitter acrid somewhat nauseous taste. It readily mingles with water, by triture, into a milky liquor, which on standing deposits a portion of resinous matter, and becomes yellowish: to rectified spirit it yields a gold-coloured tincture, which tastes and smells strongly of Opopanax. Water distilled from it is impregnated with its smell, but no essential oil is obtained on committing moderate quantities to the operation."[a]

Opopanax has been long employed by physicians, and esteemed for its attenuating, deobstruent, and aperient virtues; but as it is commonly prescribed in combination with other medicines, these qualities are by no means ascertained, nor do its sensible qualities indicate it to be a medicine of much power. Dr. Cullen classes it with the antispasmodics; it is however less fetid than galbanum, though more so than ammoniacum, and therefore may be supposed to have some affinity to a union of these two. It has commonly been given in hypochondriacal affections, visceral obstructions, menstrual suppressions, and asthmas, especially when connected with a phlegmatic habit of body. It has no place in the Mat. Med. of the Edinburgh Pharmacopœia, but, by the London College it is directed in the pillulæ e gummi.

[a] *Lewis, M. M. p. 468.*

Anethum graveolens

Published by Phillips, & Fardon, Oct.r 1.st 1806.

ANETHUM GRAVEOLENS. COMMON DILL.

SYNONYMA. Anethum. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1033. *Raii Hist. p.* 415. Anethum hortense sive vulgare. *Park. Theat. p.* 886. Anethum hortense. *Bauh. Pin. p.* 147.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 364.

Ess. Gen. Ch. Fructus subovatus, compressus, striatus. *Petala* involuta, integra.

Sp. Ch. A. fructibus compressis.

THE root is annual or biennial, long, tapering, whitish, sending off strong fibres, and striking deeply in the ground: several stems usually proceed from the same root, and are erect, smooth, channelled jointed, branched, covered with a glaucous exudation, and rise about two feet in height: the leaves stand upon sheathy footstalks, placed at the joints of the stalk, and are alternate, smooth, doubly pinnated; pinnæ linear, pointed: the flowers are produced in terminal umbels, which are large, flat, and like the partial umbels, composed of several radii: it has no involucrum: the corolla consists of five petals, which are yellow, egg-shaped, obtuse, concave, and have their points turned inwards: the five filaments are yellow, longer than the corolla, and furnished with roundish antheræ: the germen is placed below the insertion of the petals, and is covered by the nectarium: the two styles are very short, and terminated by obtuse stigmata: the seeds are two, oval, flat, striated, and surrounded with a membranous margin. The flowers appear in June and July.

This plant, which is a native of Spain and Portugal, appears by the Hortus Kewensis, to have been first cultivated in Britain by Mr. Gerard in 1597.[a] The seeds of Dill are directed for use by the London and Edinburgh Pharmacopœias; they have a moderately warm pungent taste, and an aromatic smell, but like that of the plant, not of the most agreeable kind.[b] "Water extracts very little of their virtues either by infusion or digestion for many hours. In boiling, their whole flavour exhales along with the watery vapour, and may be collected by distillation. Along with the water arises a considerable portion of pungent essential oil, smelling strongly of the Dill. These seeds impart their flavour to rectified spirit by digestion, but not by distillation, the active part of the seeds remaining in the extract."[c]

The seeds and the plant itself were formerly much used in medicine, and from the time of Dioscorides have been esteemed for their carminative and hypnotic powers, and therefore have been recommended in flatulent colics, and certain dyspeptic symptoms proceeding from a laxity of the stomach.[d] They are also said to be more effectual than the other seeds of this class in promoting the secretion of milk.[e] At this time however the seeds of Dill are seldom employed, though a simple distilled water prepared from them is directed both by the London and Edinburgh Pharmacopœias.

[a] *Hort. Kew.*

[b] Virgil does not seem to have been of this opinion:

Narcissum & florem jungit bene olentis anethi. Ecl. 2. v. 45.

[c] Lewis, *M. M. p.* 58.

[d] Forestus speaks highly of their use in allaying vomiting and hiccup. *Oper. Lib.* 6. *Obs.* 29. *& Lib.* 18. *Obs.* 12.

[e] Murray, *App. Med. vol. i. p.* 289.

Anethum Foeniculum

Published by Phillips & Pardon, Oct^r 1^st 1806

ANETHUM FŒNICULUM. COMMON FENNEL.

SYNONYMA. Fœniculum dulce. *Pharm. Lond. & Edinb.* et Fœniculum vulgare. *Pharm. Edinb.* Fœniculum dulce, et Fœniculum vulgare germanicum. *Bauh. Pin. p.* 147. Fœniculum vulgare. *Gerard. Emac. p.* 1032. *Park. Theat. p.* 884. *Raii Hist. p.* 457. *Synop. p.* 217. *Haller Hist. Stirp. Helv. n.* 760. A. Fœniculum. *Hudson. Fl. Ang. p.* 126. *Relhan. Fl. Cantab.* 123. *Withering. Bot. Arr. p.* 311. *Smith. Brit.* 329. *ic. Mill. Illust.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 364.

Ess. Gen. Ch.. *Fructus* subovatus, compressus, striatus. *Petala* involuta, integra.

Sp. Ch. A. fructibus ovatis.

THE root is perennial, white, tapering, and fibrous; three or four stems usually rise from the same root, and are erect, round, striated, of a glaucous tinge, jointed, branched, and three or four feet in height: the leaves stand alternately at the joints of the stem upon long striated sheaths, and are bipinnated, divided into long linear pointed pinnæ, of a deep green colour: the flowers are produced in terminal umbels, which resemble those of Dill: there are no involucra: the corolla consists of five petals, which are yellow, ovate, emarginated, and have their points turned inwards: the five filaments are yellow, spreading, shorter than the petals, and supplied with double antheræ: the germen is smooth, cylindrical, truncated, striated, and covered with the nectarium, which is a large roundish fleshy yellow substance, divided into two parts, from each of which rises a short thick style, terminated by a

blunt stigma: the seeds are two, oval, and deeply furrowed. The flowers appear in June.

The seeds of Fœniculum dulce are admitted of the Materia Medica in both Pharmacopœias, and the root of Fœniculum vulgare also in that of the Edinburgh College ;* but both these plants being considered as varieties of the Anethum Fœniculum, they are comprised in the figure here prefixed.

Fennel is found to grow wild in many parts of England, affecting dry chalky soils; but that which is cultivated in our gardens is more fragrant, of a sweeter flavour, and, excepting the seeds, which are brought from the south of Europe,[a] commonly used both for medicinal and culinary purposes.

The seeds have an aromatic smell, and a warm sweetish taste.—"Water extracts the virtue of these seeds very imperfectly by infusion, but carries it off totally in evaporation: after repeated infusion, they retain part of their aromatic warmth, and the liquors are much less agreeable than the seeds in substance; after boiling for some time, the seeds prove entirely insipid, and the decoction, inspissated to the consistence of an extract, is very nearly so. By distillation they impregnate water with their flavour: a gallon receives a strong impregnation from a pound of the seeds. A large portion of essential oil separates in the distillation;—in smell resembling the fennel, in taste mild and sweetish like the oil of aniseeds, and like it also congealing, by a slight cold, into a white butyraceous mass. These seeds contain likewise a considerable quantity of a gross oil of the expressed kind, which, when freed from the essential oil, discovers no particular smell or taste. This oil is

* "By Fœniculum dulce, (Dr. Cullen says) we mean seeds imported from a southern climate; we allow however the roots to be taken, as they most conveniently may, from the plants growing in our gardens." *M. M. vol. ii. p.* 158.

[a] "Fœniculum dulce copiosissime colitur in Italia & Sicilia, quarum regionum clima plus illi conciliat dulcitatis, quam in Gallia attingere potest, quare etiam planta junior, cum radice & herba, frequenter ibi estur cruda cum sale & pane." *Bergius, M. M. p.* 228. See Labat, *Voyage en Espagne & en Italie. t.* 5. *p.* 170.

extracted, along with the aromatic matter of the fennel, by digestion in rectified spirit, but separates and rises to the surface upon inspissating the filtered tincture. The spirit, gently distilled off, has very little of the flavour of the seeds; the oily matter retains a part both of their taste and smell; but much the greatest part remains concentrated in the extract."[b]

The Fœniculum of the Latins is supposed to be the Μαραθρον of the Greeks, by whom it was highly esteemed for promoting the secretion of milk,[c] an opinion which the experience of some modern authors has tended to confirm.[d] The seeds are also supposed to be stomachic and carminative, but these, and indeed all the other effects ascribed to Fennel, as depending upon their stimulant and aromatic qualities, must be less considerable than those of dill, anise, and caraway, though termed one of the four greater hot seeds.

The root, which Alston says may be called alimentum medicamentosum, which was by Boerhaavé thought to possess all the virtue of Ginseng, and which ranks as one of the five aperient roots, is now wholly disregarded. To the taste it is sweet, with very little aromatic warmth, and said to be pectoral and diuretic.

By the London Pharmacopœia a simple distilled water is directed to be prepared from the seeds of Fennel, which also enter some other officinal compositions.

[b] Lewis, *M. M. p.* 303.

[c] Hippoc. *De Morb. Mul. Lib.* 1. *Sect.* 5. *p.* 608. *Fœs.* Dioscorid. *M. M. Lib.* 3. *c.* 81. *p.* 205. *Surac.*

[d] Bergius, *Nov. Act. Ups. tol. i. p* 104. [e] *Lect. on the M. M. vol. i. p.* 335.

DAUCUS CAROTA. WILD CARROT, or BIRD's NEST.

SYNONYMA. Daucus sylvestris. *Pharm. Lond. & Edinb.* Pastinaca sylvestris tenuifolia Dioscoridis, vel Daucus officinarum. *Bauh. Pin. p.* 151. Daucus vulgaris. *Raii Synop. p.* 218. Pastinaca sylvestris tenuifolia. *Gerard Emac. p.* 1028. *Park. Theat. p.* 901. *Raii Hist. p.* 465. Daucus involucris cavis, communibus pinnatis, peculiaribus lineari lanceolatis. *Hall. Stirp. Helv. n.* 746. Daucus Carota. *Huds. Ang. p.* 114. *Lightf. Scot. p.* 156. *Withering. Bot. Arr. p.* 274. *Relhan. Cantab. p.* 112. *Smith. Brit.* 300. *Ic. Flor. Dan. p.* 723.

α Pastinaca tenuifolia sativa radice lutea. *C. Bauh.*
Yellow Garden Carrot.

β Pastinaca tenuifolia sativa radice atrorubente. *C. Bauh.*
Red Garden Carrot. *Aiton. Hort. Kew.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 333.

Ess. Gen. Ch. *Cor.* subradiatæ, omnes hermaphroditæ.
Fructus pilis hispidus.

Sp. Ch. D. seminibus hispidis, petiolis subtus nervosis.

THE root is biennial, large, spindle-shaped, fleshy, and yellowish: the stalk is round, erect, branched, furrowed, hairy, and rises about two feet in height: the leaves are large, and at the root many times pinnated; those on the stalk are gradually smaller towards the top, and cut into irregular pinnulæ, which on the upper side are of a deep green colour: the leaves are all somewhat hairy, and stand upon footstalks, which are nerved on the under side: the umbels are

Daucus Carota

Published by Phillips & Fardon, Oct.1st 1806.

composed of several radii, and form a flat surface at the top while in flower, but when the seeds ripen, become concave, and drawn together: the partial umbels are similar to those of the general: the general involucrum consists of several leaves, which are cut into long narrow segments: the partial involucrum is more simple, consisting of strap-shaped leafits: the corolla is composed of five petals, of which the outermost is the largest; they are all white, heart-shaped, and bent inwards: the five filaments are capillary, and furnished with simple antheræ: the germen is small, and supports two reflexed styles, terminated by blunt stigmata: the seeds are two, egg-shaped, convex, rough on one side, covered with strong hairs, and flat on the other. It grows wild in meadows and pastures, and flowers from June till August.

This plant, in its cultivated state, is the well-known garden Carrot, the roots of which are commonly served up at our tables. They appear by experiments to contain a large proportion of saccharine matter,* and consequently afford much nourishment: however they are found to be very difficult of digestion in the stomach, for if eaten raw, or imperfectly boiled, they usually pass through the body without suffering any material change.[a] It is on this account, probably, that raw carrots have been given to children as a vermifuge. The expressed juce, or a decoction of these roots, has been recommended in calculous complaints, and as a gargle for infants in apthous affections, or excoriations of the mouth;[b] and a poultice of scraped carrot has been found an useful application to phagedenic ulcers, and to cancerous and putrid sores.[c]

* V. Marcgr, *Mem. de l'Acad. des Sc. de Berlin.* 1747. *p.* 89. See also *Hann. Magaz.* 1773. *n.* 75.

[a] "On which account I have employed them as a means of ascertaining the "time which food takes to pass through the tract of the alimentary canal."—*Withering, l. c.*

[b] V. Rosenstein in Bosch.

[c] This use of the Carrot poultice was first discovered by Sulzer, (see *Journal de Medicine, t.* 24. *p.* 68.) since which its good effects are related by Gibson (in *Med. Obs. & Inquir. vol.* 4.) and others who have very generally found it to mitigate the pain and abate the stench of foul cancerous ulcers.

The seeds of wild Carrot, which obtain a place in the Materia Medica, have a light aromatic smell, and a warm acrid taste. "Water, digested on the seeds, becomes impregnated with their smell, but takes up very little of their taste: in distillation or evaporation, it elevates the whole of their smell and aromatic warmth: on distilling large quantities, a small portion of yellowish essential oil is obtained, of a moderately pungent taste, and smelling strongly of the daucus. Rectified spirit takes up the whole of their virtue by digestion, and elevates little in distillation: the remaining extract smells weakly, and tastes strongly of the seeds."[d] These seeds possess, though not in a very considerable degree, the aromatic qualities common to those of most of the umbelliferous plants, and hence have long been deemed carminative and emmenagogue; but they are chiefly esteemed for their diuretic powers, and for their utility in calculous and nephritic complaints,[e] in which an infusion of three spoonfuls of the seeds in a pint of boiling water has been recommended; or the seeds may be fermented in malt liquor, which receives from them an agreeable flavour, resembling that of lemon peel.[f]

[d] *Lewis, M. M. p.* 271.

[e] In opposition to this opinion, Dr. Cullen says, "We have seen the semen dauci sylvestris employed in calculous cases in considerable quantities, and for a length of time, but never found its diuretic power anywise remarkable." *M. M. vol. ii. p.* 552.

[f] *Lewis, l. c.*

Pimpinella Saxifraga

Published by Sowerby & Englefield Nov 1st 1806.

PIMPINELLA SAXIFRAGA. SMALL BURNET-SAXIFRAGE.

SYNONYMA. Pimpinella. *Pharm. Edinb.* Pimpinella saxifraga minor. *Bauh. Pin. p.* 160. Pimpinella seu saxifraga minor. *Gerard. Emac. p.* 1044. Saxifraga hircina minor. *Park. Theat. p.* 947. *Raii Hist. p.* 445. *Synop. p.* 213. Tragoselinum foliis pinnatis, pinnis ovatis. *Hall. Stirp. Helv. n.* 786. P. Saxifraga. *Hudson. Flor. Ang. p.* 127. *Smith. Brit.* 331. *Lightfoot. Flor. Scot. p.* 169. *Withering. Bot. Arr. p.* 313. *Relhan. Flor. Cant. p.* 124. *Ic. Jacq. Aust.* 395. *Flor. Dan.* 669.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 366.

Ess. Gen. Ch. *Fructus* ovato-oblongus. *Petala* inflexa. *Stigmata* subglobosa.

Sp. Ch. P. foliis pinnatis: foliolis radicalibus subrotundis; summis linearibus.

THE root is perennial, spindle-shaped, whitish: the stem is erect, round, scored, downy, jointed, towards the top a little branched, and rises above a foot in height: the leaves are variously shaped, pinnated, alternate; on the upper part of the stem they divide into simple linear laciniæ; toward the bottom the pinnæ are broader, and at the root roundish, and deeply indented at the edges: the flowers are white, and stand in umbels, which are terminal, flat, consisting of twelve radii or more, both in the general and partial umbels: there is no involucrum: the proper corolla consists of five petals, which are ovate, and bent inwards at their extremities: the filaments are white, tapering, spreading, and furnished with roundish antheræ: the germen is egg-shaped, striated, and upon it is placed a white fleshy double nectarium: the two styles are

short, white, and furnished with simple stigmata: the seeds are naked, furrowed, egg-shaped. It is a native of this country, and grows in dry meadows and pastures: the flowers appear in August and September.

Several species of Pimpinella were formerly officinally used, of which the P. magna, and the species represented in the annexed plate, were the principal; in their medicinal qualities however these are found to have no remarkable difference.* The roots, which obtain a place in the Materia Medica of the Edinburgh Pharmacopœia, have an unpleasant smell, and a hot pungent bitterish taste:† on drying, or on being long kept, their pungency is considerably diminished. Their virtue is extracted partially by water, and completely by rectified spirit. When large quantities of the root are distilled with water, a small portion of essential oil, extremely acrid and fiery, may be obtained.[a]

Bergius states the virtues of this root to be resolvent, diaphoretic, stomachic, and diuretic.[b] It is recommended by several writers[c] as a stomachic, and in all cases where pituitous humours are thought to prevail, as asthmas, dropsies, catarrhal coughs, hoarsenesses, and what has been called angina serosa; and by Hoffmann[d] it is said to be an excellent emmenagogue. In the way of gargle it has been employed for dissolving viscid mucous, and to stimulate the tongue, when that organ becomes paralytic.

Pimpinella formerly entered the officinal pulvis ari, and like the arum it appears to be an acrid stimulant; but how far this quality renders it fit for the cure of the above-mentioned disorders, we leave to the consideration of others. It may be given in doses of a scruple in substance, and in infusion to two drams.

* *Murray, App. Med. vol. i. p.* 295.

† Hence chewing it is recommended to relieve the tooth-ach.

[a] *Lewis, Mat. Med. p.* 502.

[b] *M. M. p.* 230.

[c] Especially German Physicians.

[d] *Med. off. p.* 533.

Pimpinella Anisum

Published by Phillips & Fardon Nov.r 2.nd 1806.

PIMPINELLA ANISUM. ANISE.

SYNONYMA. Anisum. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1035. *Park. Theat. p.* 911. *Raii Hist. p.* 450. Anisum herbariis. *Bauh. Pin. p.* 159. Anisum vulgare. *Clus. Hist. ii. p.* 202. Anisum vulgatius minus annuum. *Hist. Ox. iii. p.* 297.

Sp. Ch. P. foliis radicalibus trifidis incisis.

THE root is annual, tapering: the stem is upright, branched, striated, jointed, smooth, and rises about a foot in height: the leaves on the upper part of the stem are divided into narrow pinnated segments, but at the bottom they are roundish, separated in three or five indented lobes, and stand upon scored sheath-like footstalks: the flowers are small, white, and placed in umbels, which are terminal, flat, consisting of several general and partial radii, without involucra: the parts of inflorescence resemble those of the P. Saxifraga; therefore need not be repeated here. It is a native of Egypt, and flowers in July.

The Anise was cultivated here in the time of Turner, (1551) but our summers are seldom warm enough to bring the plant to perfection. The seeds, according to Miller, are annually imported here from Malta and Spain, where the Anise is chiefly cultivated. Savary also informs us, that "the Maltese and Alicant Anise is most esteemed, though not so green as the French;" and the Spanish Aniseeds are easily distinguished from those of France and Germany, by being much smaller.

Aniseeds have an aromatic smell, and a pleasant warm taste, accompanied with a considerable degree of sweetness. "They totally give out their virtue to rectified spirit.—The spirit, distilled off from the filtered tincture, has a light taste of the seeds, but leaves far the greatest part of their virtue behind in the extract.—Infused in water, they impart a little of their smell, but scarcely any taste: in distillation they give out the whole of their flavour."

"Along with the water arises an essential oil, to the quantity of an ounce or more from three pounds."

"This oil, in colour yellowish, congeals, even when the air is not sensibly cold, into a butyraceous white concrete. Its smell, which exactly resembles that of the Aniseeds, is extremely durable and diffusive; its taste is milder and less pungent than that of almost any other distilled vegetable oils."

"These seeds yield an oil likewise upon expression, of a greenish colour, in taste grateful, and strongly impregnated with the flavour of the seeds: sixteen ounces, lightly moistened by exposure to the steam of boiling water, are said to afford one ounce. This oil is composed of a gross insipid, inodorous one, of the same nature with the common expressed oils; and a part of the essential oil of the seed, on which the flavour depends."[a]

The seeds of Anise, which are ranked among the four greater hot seeds, have been long medicinally employed by physicians as an aromatic and carminative, in preference to those of most of the other umbelliferous plants; they have also been esteemed useful in pulmonary complaints, and to possess, like those of fennel, a power of promoting the secretion of milk. Their chief use however is in flatulencies, and in the gripes, to which children are more especially liable; and they are usefully combined with such purgatives as are apt to produce these effects. Weakness of the stomach, diarrhœas, and loss of tone in the primæ viæ, are likewise complaints in which Aniseeds are supposed to be peculiarly useful; and hence by V. Helmont they were called *Solamen intestinorum.*

The essential oil,* which is the only officinal preparation of Aniseeds now directed by the Pharmacopœias, is usually grateful to the stomach, and may be taken in the dose of twenty drops. In diseases of the breast, the oil is preferred, but in flatulencies and colics the seeds in substance are said to be more effectual.[b]

[a] *Lewis, M. M. p.* 62.

* It is asserted, that this oil proves a poison to pigeons, Oleum Anisi præsentaneum est venenum columbis, si pancæ guttulæ ipsarum rostro instillentur & capiti infricentur, ut observavit Rud. A. Vogel. (Hist. Mat. Med. 161) & confirmavit P. (Stralsund. Mag. p. i. p. 56.) Vide *Bergius, M. M. p.* 232. [b] *Lewis, l. c.*

Coriandrum sativum

Published by Phillips, & Fardon, Nov.1st 1806.

CORIANDRUM SATIVUM. COMMON CORIANDER.

SYNONYMA. Coriandrum. *Pharm. Lond. & Edinb. J. Bauh. vol. iii. p.* 89. *Gerard. Emac. p.* 1012. *Raii Hist. p.* 470. *Synop. p.* 221. *Hall. Stirp. Helv. n.* 764. Coriandrum majus. *Bauh. Pin. p.* 158. Coriandrum vulgare. *Park. Theat. p.* 918. C. sativum. *Hudson. Flor. Ang. p.* 123. *Withering. Bot. Arr. p.* 302. *Smith. Brit.* 320. *Sowerby's English Botany, p.* 67. Κορις vel Κορίαννον. *Dioscorid.* Κόριανον. *Theophr.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 356.

Ess. Gen. Ch. *Cor.* radiata: *Petala* inflexo-emarginata. *Involucr. universale* 1-phyllum: *Partialia* dimidiata. *Fructus* sphæricus.

Sp. Ch. C. Fructibus globosis.

THE root is annual: the stalk is erect, branched, round, smooth, of a glaucous tinge, and rises about two feet in height: the leaves are variously pinnated; those of the upper part of the stalk are divided into narrow linear alternate pointed segments; those at the bottom are cut into irregular serrated lobes, resembling the leaves of common parsley: the flowers are white, or reddish, and placed in terminal umbels, appearing in June: the partial umbels are composed of more radii than the general, and each is furnished with an involucrum of three narrow leaves; but the general involucrum is commonly wanting, or composed of a simple leafit: the general corolla is irregular in its shape, and unequal: the petals are five, oblong, bent inwards, and at the circumference the outermost are the largest: the filaments are five, slender, and furnished with roundish yellow antheræ: the germen is globular, placed below the insertion of the corolla, and supports two short

styles, bent in opposite directions, and terminated by simple stigmata: the fruit is globular, and divisible into two hemispherical concave seeds.

This plant is a native of the South of Europe, where in some places it is said to grow in such abundance, as frequently to choke the growth of wheat and other grain.[a] From being cultivated here as a medicinal plant, it has for some time become naturalized to this country,[b] where it is usually found in corn fields, the sides of roads, and about dunghills.

Every part of the plant, when fresh, has a very offensive odour,* but upon being dried the seeds have a tolerably grateful smell, and their taste is moderately warm, and slightly pungent. "They give out their virtue totally to rectified spirit, but only partially to water. In distillation with water, they yield a small quantity of a yellowish essential oil, which smells strongly and pretty agreeably of the Coriander."[c]

Dioscorides[d] asserts, that these seeds, when taken in a considerable quantity, produce deleterious effects; and in some parts of Spain and Egypt, where the fresh herb is eaten as a cordial, instances of fatuity, lethargy, &c. are observed to occur very frequently;[e] but these qualities seem to have been unjustly ascribed to the Coriander; and Dr. Withering informs us, that he has "known six drams of the seeds taken at once without any remarkable effect."[f]

[a] See Murray, *App. Med. vol. i. p.* 278. [b] See *English Botany, p.* 67.

* "Coriander was probably so called from κορις cimex, because the green herb, seed and all, stinks intolerably of bugs." Alston. *Lect. on the M. M. vol. ii. p.* 349.

[c] *Lewis, M. M. p.* 253.

[d] "Si largius sumptum fuerit semen, mentem, non sine periculo, e sua sede & statu demovet." And again, "Coriandrum propter odorem latere non potest: epotum vocis raucitatem facit, atque insaniam, qualis ex vinolentia proficiscitur, ita ut qui sumpsere varia dicta pudenda blatterant: toto vero corpore coriandri odor se prodit." *L.* 3. *c.* 71. [e] Vide *C. Hoffmann. Med. Off. p.* 241.

[f] *Withering, l. c.*

Sium nodiflorum

Published by Phillips, & Fordon, Nov.r 1.st 1806.

These seeds, like those last mentioned, and indeed those of most of the umbelliferous plants, possess a stomachic and carminative power. They are directed in the infusum amarum, the infusum sennæ tartarisatum, and some other compositions of the Pharmacopœias; and according to Dr. Cullen, the principal use of these seeds is, "that, infused along with senna, they more powerfully correct the odour and taste of this than any other aromatic that I have employed; and are, I believe, equally powerful in obviating the griping that senna is very ready to produce."[s]

[s] *Mat. Med. vol. ii. p.* 158.

SIUM NODIFLORUM. CREEPING WATER PARSNEP.

SYNONYMA. Sium. *Pharm. Lond.* Sium aquaticum procumbens, ad alas floridum. *Moris. Hist. iii. p.* 283. *s.* 9. *t.* 5. *f.* 3. *Petiv. t.* 26. *f.* 3. Sium umbellatum repens. *Gerard. Emac. p.* 256. *Raii Synop. p.* 211. *Hist.* 444. Sium foliis radicalibus ovatis, pinnatis, dentatis; caulinis appendiculatis; umbellis alaribus. *Hall. Stirp. Helv. n.* 778. S. nodiflorum. *Hudson. Flor. Ang. p.* 119. *Withering. Bot. Arr. p.* 292. *Lightfoot. Flor. Scot. p.* 161. *Relhan. Flor. Cantab. p.* 116. *Smith. Brit.* 313. *Eng. Bot.* 639.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 348.

Ess. Gen. Ch. *Fructus* subovatus, striatus. *Involucrum* polyphyllum, *Petala* cordata.

Sp. Ch. S. foliis pinnatis, umbellis axillaribus sessilibus.

THE root is perennial, long, creeping, and hung with numerous fibres: the stem is jointed, thick, succulent, scored, procumbent, branched, and seldom reaches a foot in length: the leaves are pinnated, consisting of three or four pairs of pinnæ, terminated by an odd one; the pinnæ or segments are ovate, pointed, serrated, sessile: the flowers are small, and stand in axillary umbels, which are composed of from six to nine general radii, and about an equal number of partial radii: there is no general involucrum, but the partial one consists of five, six, or seven ovate pointed leafits: the corolla is composed of five petals, which are entire, ovalish, white, largest at the circumference, and bent inwards at their apices: the five filaments are slender, spreading, rather longer than the corolla, and furnished with roundish antheræ: the germen is small, placed beneath the corolla, and supports two slender reflexed styles, terminated by blunt stigmata: the fruit is egg-shaped, small, scored, divisible, into two seeds, which are flat on one side, on the other convex and scored. It is common in rivers and ditches, and flowers in July and August.

This plant is not admitted into the Materia Medica of any of the Pharmacopœias which we have seen, except that of the London College, where it has lately been received in the character of an antiscorbutic, or rather as a corrector of acrid humours, especially when manifested by cutaneous eruptions and tumours in the lymphatic system, for which we have the testimony of Beirie[a] and Ray.[b] But the best proofs of its efficacy are the following given by Dr. Withering: "A young lady, six years old, was cured of an obstinate cutaneous disease, by taking three large spoonfuls of the juice twice a day: and I have repeatedly given to adults three or four ounces every morning, in similar complaints, with the greatest advantage. It is not nauseous, and children take it readily if mixed with milk. In the dose I have given it, it neither affects the head, the stomach, nor the bowels."[c]

[a] See *l. c.* [b] *Dict. de la Mat. Med.* [c] *Synop. p.* 213.

Ligusticum Levisticum.

Published by Phillips & Fardon, Nov.r 1st 1806.

LIGUSTICUM LEVISTICUM. COMMON LOVAGE.

SYNONYMA. Levisticum. *Pharm. Edinb.* Ligusticum vulgare. *Bauh. Pin. p.* 157. Ligusticum vulgare, foliis apii. *J. Bauh. iii. p.* 122. Levisticum vulgare. *Gerard. Emac. p.* 1008. *Park. Theat. p.* 936. *Raii. Hist. p.* 437. Angelica montana perennis, Paludapii folio. *Tourn. Inst. p.* 313.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 346.

Ess. Gen. Ch. *Fructus* oblongus, 5-sulcatus utrinque. *Corollæ* æquales. *Petalis* involutis, integris.

Sp. Ch. L. foliis multiplicibus: foliolis superne incisis.

THE root is perennial, long, tapering, branched, externally brown, internally whitish: the stalk is erect, branched, smooth, striated, and rises five or six feet in height: the upper leaves are small, and irregularly cut into narrow elliptical segments; the lower leaves are large, doubly pinnated; pinnæ indented, pointed, often lobed, and placed in pairs with an odd one at the top: the flowers are small, of a whitish yellow colour, and produced in umbels: the general and partial umbels are composed of nearly an equal number of radii, and each furnished with involucra, consisting of about seven simple ovate segments: all the flowers are fertile: the corolla consists of five petals, which are egg-shaped, and turned inwards: the five filaments are capillary, shorter than the corolla, and furnished with simple antheræ: the germen is truncated at the top, upon which are placed two nectarious corpuscles, supporting two short styles, crowned with simple stigmata: the fruit is oblong, angular, furrowed, divisible into two seeds, which

are oblong, on one side striated and convex, on the other flat and smooth: the flowers appear in June and July. It is a native of the Alps, and according to Mr. Aiton was first cultivated in England by Mr. Gerard.

The odour of this plant is very strong, and peculiarly ungrateful; its taste is warm and aromatic. It abounds with a yellowish gummy resinous juice, very much resembling opoponax. Its virtues are supposed to be similar to those of angelica and masterwort in expelling flatulencies, exciting sweat, and opening obstructions; therefore chiefly used in hysterical disorders, and in uterine obstructions. A teacupful of the juice with rhenish wine, or a decoction of the seeds with wine or mugwort water, was, by Forestus,[a] said to be a secret remedy of extraordinary efficacy in slow or laborious parturition. The leaves, eaten as sallad, are accounted emmenagogue.[b] The root, which is less ungrateful than the leaves, is said to possess similar virtues, and may be employed in powder.

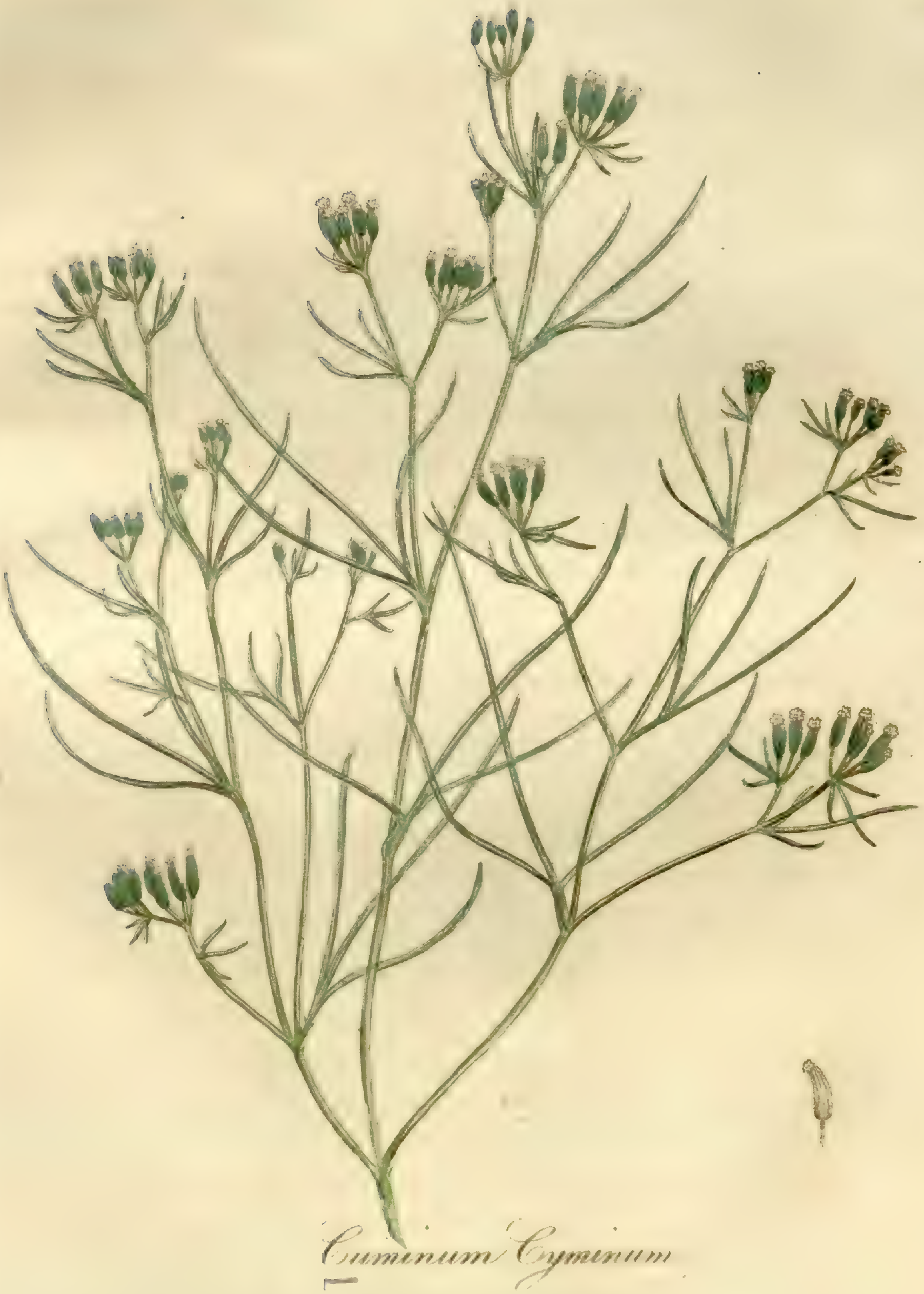
[a] See Forest. lib. 28. obs. 32. in schol. [b] Chomel. Usuelles, t. 2. p. 216.

CUMINUM CYMINUM. CUMMIN.

SYNONYMA. Cuminum. *Pharm. Lond. & Edinb.* Cuminum semine longiore. *Bauh. Pin. p.* 146. Cuminum sativum Dioscoridis. *Gerard. Emac. p.* 1066. Cyminum, sive Cuminum sativum. *J. Bauh. iii. p.* 22. *Raii Hist. p.* 433. Cuminum vulgare. *Park. Theat. p.* 887. Cuminum. *Mor. Umb.* 4. *Hist. Oxon. iii. p.* 271. Fœniculum orientale, Cuminum dictum. *Tourn. Inst.* 312. *Icon. Rivin. Pentap. t.* 40.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 351.

Ess. Gen. Ch. Fructus ovatus, striatus. *Umbellulæ* 4. *Involucra* 4-fida.



Cuminum Cyminum

Published by Phillips & Fardon, Dec.r 1st 1806.

THE root is annual, simple, fibrous: the stalk is round, slender, often procumbent, branched, and rises about six or eight inches in height: the leaves are numerous, narrow, linear, pointed, grass-like: the flowers are purple, and produced in numerous small umbels, which are usually composed of four radii, each supporting a partial umbel of a like number: the general and partial involucra consist of four narrow pointed segments: all the florets are fertile: the corolla is composed of five petals, which are unequal, bent inwards, and notched at the apex: the filaments are five, and furnished with simple antheræ: the germen is large, ovate, and placed below the corolla: the two styles are minute, and terminated by simple stigmata: the fruit is egg-shaped, or oblong, striated: the seeds are two, oblong, flat on one side, convex and striated on the other.

This plant, which is the only species of Cuminum yet discovered, is a native of Egypt and Ethiopia, and is cultivated in the islands of Sicily and Malta, from whence we are supplied with the seeds.[a]

"Cumin seeds have a bitterish warm taste, accompanied with an aromatic flavour, but not agreeable. They give out great part of their smell by infusion in water, but very little of their taste: in distillation with water, a pungent oil arises, of a strong ungrateful flavour like that of the seeds: the decoction, inspissated, leaves a weakly roughish bitterish extract. Rectified spirit takes up the whole virtues of the cummin by infusion, and leaves them nearly uninjured in evaporation."[b]

Cummin has been thought to be the Κυμινον of Dioscorides. The seeds, which rank as one of the four greater hot seeds, contain a large proportion of essential oil, and are therefore supposed to possess a carminative and stomachic power, equal, if not superior to most of those of the umbelliferous class.[c] They are generally preferred to the other seeds for external use in discussing indolent tumours, and give name both to a plaster and cataplasm in the Pharmacopœias.

[a] It was cultivated in England in 1594 by Sir Hugh Plat. See *Plat's Garden of Eden. part. ii. p.* 134. *Hort. Kew.*

[b] *Lewis. Mat. Med. p.* 268. [c] *Cullen. M. M. vol. ii. p.* 159.

ORD. VII. HEDERACEÆ.

From *Hedera* Ivy.—Ivy-like Plants.

VITIS VINIFERA. COMMON VINE.

SYNONYMA. Vitis. *Pharm. Lond.* Vitis vinifera. *Bauh. Pin. p.* 299. *J. Bauh. Hist. iii. p.* 67. *Gerard. Emac. p.* 875. *Park. Theat. p.* 1555. *Raii Hist.* 1613. *Kniph. Bot. orig. cent.* 6. *Duhamel. Arb. ii. p.* 360. *t.* 106. *Schmidel. Ic. plant. t. vii.*
β. Vitis corinthiaca s. apyrena. *Bauh. Hist. ii. p.* 72.

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 284.

Ess. Gen. Ch. *Petala* apice cohærentia, emarcida. *Bacca* 5-sperma, supera.

Sp. Ch. V. foliis lobatis sinuatis nudis.

THE Vine sends off numerous long slender climbing branches, and is covered with rough dark brown bark: the leaves are roundish deeply serrated, commonly divided into three lobes, and stand alternately upon long footstalks: the flowers are small, and produced in spikes: the calyx is divided into five small narrow segments: the petals are five, small, oblong, whitish, withered, adherent at their apices, and soon fall off: the five filaments are tapering, and furnished with simple antheræ: the germen is egg-shaped, without any style, but supplied with a cylindrical stigma: the fruit is a large round berry, of one cell, and contains five hard seeds, of an irregular form. The flowers appear in June and July.

Vitis vinifera

Published by Phillips & Fardon, Dec 1st 1818.

The Vine is a native of most of the temperate parts of the four quarters of the world, and is successfully cultivated in our hemisphere between the thirtieth and fifty-first degree of latitude. Through the effects of culture, and a difference of soil and climate, numerous varieties of grapes are produced, differing widely in shape, colour, and taste, and affording wines, which are known to be extremely various. Vine leaves, called *pampini*, and the tendrils or *capreoli*, have an astringent taste, and were formerly used in diarrhœias, hemorrhages, and other disorders, requiring refrigerant and styptic medicines. The juice, or sap, of the Vine, named *lachryma*, has been recommended in calculous disorders, and is said to be an excellent application to weak eyes, and specks of the cornea. The unripe fruit has a harsh rough sour taste: its expressed juice, called verjuice, was much esteemed by the ancients, but is now superseded by the juice of lemons; for external use however, particularly in bruises and sprains, verjuice is still employed, and considered to be a very useful application.

The dried fruit constitutes an article of the Materia Medica, under the name of uva passa, of which two kinds were formerly mentioned in our Pharmacopœias, viz. Uvæ passæ majores & minores, or raisins and currants; the latter is a variety of the former, or the fruit of the Vitis corinthiaca seu apyrena, of C. B. The manner of preparing them is by immersing them in a solution of alkaline salt, and soap lye made boiling hot, to which is added some olive oil and a small quantity of common salt, and afterwards drying them in the shade.[a] These fruits are used as agreeable lubricating acescent sweets, in pectoral decoctions, and for obtunding the acrimony of other medicines, and rendering them grateful to the palate and stomach. They are directed in the Decoctum hordei compositum, Tinctura sennæ, and Tinctura cardamomi composita.

Wine, or the fermented juice of the grape, of which there is a great variety, has by medical writers been principally confined to four sorts, as sufficient for officinal use. These are the vinum album

[a] See Antill in *American Philosophical Transact. vol. i. p.* 194.

hispanicum, mountain; vinum canarium, canary or sack; vinum rhenanum, rhenish; and vinum rubrum, red port.

On a chemical investigation, all wines consist chiefly of water, alcohol, a peculiar acid, the aërial acid, tartar, and an astringent gummy resinous matter, in which the colour of red wine resides, and which is expressed from the husks of the grapes. They differ from each other in the proportion of these ingredients, and particularly in that of the alcohol, which they contain.

The qualities of wines depend not only upon the difference of the grapes, as containing more or less saccharine juice, and of the acid matter which accompanies it, but also upon circumstances attending the process of the fermentation. Thus, if the fermentation be incomplete, the wine may contain a portion of *must*, or unassimilated juice; or if it be too active, or too long protracted, it may be converted into vinegar.[b]

New wines are liable to a strong degree of acescency when taken into the stomach, and thereby occasion much flatulency, and eructations of acid matter; heart-burn, and violent pains of the stomach from spasms are also often produced; and the acid matter, by passing into the intestines, and mixing with the bile, is apt to occasion colics, or excite diarrhœas. Sweet wines are likewise more disposed to become acescent in the stomach than others; but as the quantity of alcohol which they contain is more considerable than appears sensibly to the taste, their acescency is thereby in a great measure counteracted. Red port, and most of the red wines, have an astringent quality, by which they strengthen the stomach, and prove useful in restraining immoderate evacuations; on the contrary, those which are of an acid nature, as rhenish, pass freely by the kidneys, and gently loosen the belly. But this, and perhaps all the thin or weak wines, though of an agreeable flavour, yet, as containing little alcohol, are readily disposed to become acetous in the stomach, and thereby to aggravate all arthritic and calculous complaints, as well as to produce the effects of new wine.

[b] *See Cullen M. M. vol. i. p. 413.*

The general effects of wine are, to stimulate the stomach, exhilarate the spirits, warm the habit, quicken the circulation, promote perspiration, and in large quantities to prove intoxicating, and powerfully sedative.

In many disorders wine is universally admitted to be of important service, and especially in fevers of the typhous kind, or of a putrid tendency; in which it is found to raise the pulse, support the strength, promote a diaphoresis, and to resist putrefaction; and in many cases it proves of more immediate advantage than the Peruvian bark. Delirium, which is the consequence of excessive irritability, and a defective state of nervous energy, is often entirely removed by the free use of wine. It is also a well-founded observation, that those who indulge in the use of wine, are less subject to fevers, both of the malignant and intermittent kind. In the putrid sore throat, in the small-pox, when attended with great debility and symptoms of putrescency, in gangrenes, and in the plague, wine is to be considered a principal remedy. And in almost all cases of languors, and of great prostation of strength, wine is experienced to be a more grateful and efficacious cordial than can be furnished from the whole class of aromatics.

The Tartar, which is thrown off from wines to the sides and bottom of the cask, is also an officinal article, and consists of the vegetable alkali supersaturated with acid. When taken from the cask, it is found mixed with an earthy, oily, and colouring matter: that obtained from red wine is of deep brown colour, and commonly called red, and when it is of a paler colour, white tartar. It is purified by dissolving it in boiling water, and separating the earthy part by filtering the boiling solution. On cooling the solution, it deposits irregular crystals, containing the colouring matter, which is separated by boiling the mass with white clay. The tartar, thus purified, is called cream of tartar. If this be exposed to a red heat, its acid flies off, and what remains is the vegetable alkali, or salt of tartar.

Crystals of tartar are in common use as a laxative and mild cathartic; they are also esteemed for their cooling and diuretic

qualities, and therefore have been much employed in dropsies, and other cases requiring an antiphlogistic treatment. Dr. Cullen says, "that in large doses they act like a purgative in exciting the action of the absorbents in every part of the system, and that more powerfully than happens from the operation of any entirely neutral salt;" and on this is founded their utility in the cure of dropsy. It must be remarked, however, that they do not readily pass off by the kidneys, unless taken with a large quantity of water; and therefore when intended as a diuretic they ought to be given in a liquid form, as Dr. Holme has directed. The dose is to be regulated according to the circumstances, from a dram to two ounces. These salts enter several officinal compositions.

Another article to be noticed here is Vinegar, which has been esteemed of great use in almost all inflammatory and putrid disorders, whether internal or external. Bergius says, it is refrigerans, resolvens, antiputredinosa, alexiteria, antiphlogistica, digestiva, antiscorbutica, diaphoretica. It is very efficacious in counteracting the effects of vegetable poisons, especially those of the narcotic kind. Inhaled in the form of a vapour, it is found useful in the putrid sore throat; and it has been given successfully in mania, and in rabies canina. Distilled and neutralized with volatile alkali, it forms the aqua ammoniæ acetatæ, or spiritus Mindereri, a medicine of common use in fevers. By distillation, however, the vinegar generally contracts an empyreumatic taste, and is seldom found in a rightly concentrated state; when required to be of great strength, it may be rendered so by freezing it, after the manner we have directed for concentrating the juice of lemons.

Vinegar is also much employed as a menstruum, or for extracting the virtues of other medicines.

Panax quinquefolium

Published by Phillips, & Fardon, Dec.1st 1806.

PANAX QUINQUEFOLIUM. GINSENG.

SYNONYMA. Ginseng. *Pharm. Lond. & Edinb. Raii Hist. p.* 1338. Aureliana canadensis. *Lafiteau* in *Memoires concernant la precieuse plante de Ginseng. Paris,* 1718. Et *Hist. de L'Acad.* 1718. *p* 42. *Catesby's Car.* 3. *p.* 16. *t.* 16. *Breyn.* in *Prod. rar. pl.* 2. *p.* 35. *Fig. ad. p.* 52. Araliastrum foliis ternis quinquepartitis Gingseng s. Nïnsin officinarum. *Ehret. tabul. a Trew, t.* 6. *fig.* 1. Gin-seng Chinensibus. *Jartoux Phil. Trans. vol. xxviii. p.* 237. *Conf. Des lettres edifiantes & curieuses, tom. x. p.* 172. Araliastrum, quinquefolii folio, majus Ninsin[a] vocatum. *Vall. Sex.* 43.

Class Polygamia. *Ord.* Dioecia. *Lin. Gen. Plant.* 1166.

Ess. Gen. Ch. Hermaphrod. Umbella. *Cal.* 5-dentatus, superus. *Cor.* 5-petala. *Stam.* 5. *Styli* 2. *Bacca* disperma.

Masc. Umbella. *Cal.* integer. *Cor.* 5-petala. *Stam.* 5.

Sp. Ch. P. foliis ternis quinatis.

THE root is perennial, small, wrinkled, branched, of a pale yellowish colour, and sends off many short slender fibres: the stalk is erect, smooth, round, simple, tinged of a deep purple colour, and above a foot in height: the leaves arise with the flower stem from a thick joint at the extremity of the stalk; they are generally three, but sometimes more, of the digitated kind, each dividing into five simple leaves, which are of an irregular oval shape, serrated, veined, pointed, smooth, of a deep green colour above, and stand upon short footstalks proceeding from a common petiolus, which is long,

[a] The plant formerly known by this name is now understood to be the Sium Ninsi, of Linnæus.

round, and almost erect: the flowers are white, produced in a roundish terminal umbel, and are hermaphrodite or male on separate plants: the former, which we have figured, stand in close simple umbels: the involucrum consists of several small, tapering, pointed, permanent leaves; the proper calyx is tubular, and divided at the rim into five small teeth: the corolla consists of five petals, which are small, oval, equal, and reflexed: the filaments are five, short, and furnished with simple antheræ: the germen is roundish, placed below the corolla, and supports two short erect styles, crowned by simple stigmata: the fruit is an umbilicated two-celled berry, each containing a single irregularly heart-shaped seed. The flowers appear in June.

Ginseng was formerly supposed to grow only in Chinese Tartary, affecting mountainous situations, shaded by close woods; but it has now been long known that this plant is also a native of North America, whence M. Sarrasin transmitted specimens of it to Paris in the year 1704;[b] and the Ginseng since discovered in Canada, Pensylvania, and Virginia, by Lafiteau,[c] Kalm,[d] Bartram,[e] and others, has been found to correspond exactly with the Tartarian species, and its roots are now regularly purchased by the Chinese, who consider them to be the same as those of eastern growth, which are known to undergo a certain preparation, whereby they assume an appearance somewhat different. For it is said that in China the roots are washed and soaked in a decoction of rice, or millet-seed, and afterwards exposed to the steam of the liquor, by which they acquire a greater firmness and clearness than in their natural state.* The plant was first introduced into England in 1740 by that industrious naturalist Peter Collinson,[f] and our

[b] Sarrasin was correspondent of the Royal Academy of Sciences, in the history of which his account was published in 1718. See p. 44.

[c] L. c. [d] *Rosa til N. America, t. iii. p.* 334. [e] *Comm. Nor.* 1741. *p.* 361.

* The Chinese value these roots in some measure according to their figure, esteeming those very highly which are regularly forked, or have a fancied resemblance to the human form.

[f] See *Hort. Kew.*

figure was drawn from a good specimen, growing in the Royal Botanic garden at Kew.

The dried root of Ginseng, as imported here, is scarcely the thickness of the little finger, about three or four inches long, frequently forked, transversely wrinkled, of a horny texture, and both internally and externally of a yellowish white colour. "To the taste it discovers a mucilaginous sweetness, approaching to that of liquorice, accompanied with some degree of bitterishness, and a slight aromatic warmth, with little or no smell. It is far sweeter and of a more grateful smell than the roots of fennel, to which it has by some been supposed similar; and differs likewise remarkably from those roots, in the nature and pharmaceutic properties of its active principles; the sweet matter of the Ginseng being preserved entire in the watery as well as the spirituous extract, whereas that of fennel roots is destroyed or dissipated in the inspissation of the watery tincture. The slight aromatic impregnation of the Ginseng is likewise in good measure retained in the watery extract, and perfectly in the spirituous."[a]

The Chinese ascribe extraordinary virtues to the root of Ginseng, and have long considered it as a sovereign remedy in almost all diseases to which they are liable, having no confidence in any medicine unless in combination with it. It is observed by Jartoux, that the most eminent Physicians in China have written volumes on the medicinal powers of this plant, asserting that it gives immediate relief in extreme fatigue, either of body or mind, that it dissolves pituitous humours, and renders respiration easy, strengthens the stomach, promotes appetite, stops vomitings, removes hysterical, hypochondriacal, and all nervous affections, and gives a vigorous tone of body, even in extreme old age.[b] These, and many other effects of this root, equally improbable and extravagant, are related by various authors, and Jartoux was so much biassed by this eastern prejudice in favour of Ginseng,

[a] *Lewis, M. M. p.* 325.

[b] L. c. See also Decker, (*Exercit. pract. p. m.* 670.)

that he seems to have given them full credit, and confirms them in some measure from his own experience.[i] But we know of no proofs of the efficacy of Ginseng in Europe, and from its sensible qualities we judge it to possess very little power as a medicine.[k] It is recommended in decoction, viz. a dram of the root to be long boiled in a sufficient quantity of water for one dose.

[i] He says, "Nobody can imagine that the Chinese and Tartars would set so high a value upon this root, if it did not constantly produce a good effect."—"I observed the state of my pulse, and then took half of a root raw: in an hour after I found my pulse much fuller and quicker; I had an appetite, and found myself much more vigorous, and could bear labour much better and easier than before. But I did not rely on this trial alone, imagining that this alteration might proceed from the rest we had that day: but four days after, finding myself so fatigued and weary that I could scarce sit on horseback, a Mandarin who was in company with us perceiving it, gave me one of these roots: I took half of it immediately, and an hour after I was not the least sensible of any weariness. I have often made use of it since, and always with the same success. I have observed also, that the green leaves, and especially the fibrous parts of them chewed, would produce nearly the same effect." *Phil. Trans. vol. xxviii. p.* 239.

[k] Dr. Cullen says, "We are told that the Chinese consider Ginseng as a powerful aphrodisiac; but I have long neglected the authority of popular opinions, and this is one instance that has confirmed my judgment. I have known a gentleman, a little advanced in life, who chewed a quantity of this root every day for several years, but who acknowledged he never found his faculties in this way improved by it." *Mat. Med. v. ii. p.* 161.

Aristolochia Serpentaria.

Published by Phillips & Fardon, Dec.1st 1806.

ORD. VIII. SARMENTACEÆ.

From *Sarmentum*, a long shoot like that of a vine: an order consisting of Plants which have climbing stems and branches, by which they attach themselves to the neighbouring bodies for support.

ARISTOLOCHIA SERPENTARIA. SNAKE-ROOT BIRTHWORT.

SYNONYMA. Serpentaria virginiana. *Pharm. Lond. & Edinb.* Aristolochia Pistolochia s. Serpentaria virginiana, caule nodoso. *Pluk. Alm.* 50. *t.* 148. *Catesby Hist. of Carol. t. p.* 29. *tab.* 29. *Raii Hist. vol. iii. p.* 394. Aristolochia polyrrhizos virginiana, &c. *Morris. Hist. p.* 310. *Park. Theat. p.* 420.

Class Gynandria. *Ord.* Hexandria. *Lin. Gen. Plant.* 1022.

Ess. Gen. Ch. Hexagyna. *Cal.* 0. *Cor.* 1-petala, lingulata, integra. *Caps.* 6-locularis, infera.

Sp. Ch. A. fol. cordato-oblongis planis, caulibus infirmis flexuosis teretibus, flor. solitariis. *Caulis geniculata valde nodosa. Flores ad radicem.*

THE root is perennial, and composed of a number of small fibres, proceeding from a common trunk; externally brown, and internally whitish: the stems are slender, round, crooked, jointed, and rise about eight or ten inches in height: the leaves are heart-shaped, entire, pointed, veined, and stand upon strong footstalks, to which they are attached by three prominent ribs: it has no calyx: the flowers are monopetalous, solitary, of a purplish brown colour, and placed upon long sheathed jointed peduncles, which rise from the lower articulations of the stem: the corolla is

tubular, irregular; at the base distended into a globular figure, at the middle contracted and twisted, at the extremity spreading, and of a triangular form: it has no filaments, but six antheræ, which are attached to the under side of the stigma: the germen is oblong, angular, and placed below the corolla: the style is extremely short: the stigma is roundish, and divided into six parts: the capsule is hexagonal, separated into six cells, which contain several small flat seeds. It is a native of Virginia, and flowers in August.

The first account we have of Serpentaria is that given in Johnson's edition of Gerard, in which we are told that it was brought from Virginia, and grew in the garden of Mr. John Tradescant, of South Lambeth, in 1632. But Johnson evidently confounds the Serpentaria with the Pistolochia cretica of Clusius. In 1635, Dr. J. Cornutus published at Paris, Canadensium plantarum, aliarumque nondum editarum, Historia, wherein the Serpentaria is noticed under the name of Radix Snagroel Nothæ Angliæ, and highly extolled as an effectual remedy for the bites of the most poisonous serpents.*

Plukenet, whose botanical knowledge of this plant will not be doubted, informed Dale, that the roots of three different species of Aristolochia were sent to Europe for those of snake-root;[a] but though this might have happened a century ago, at present the

* "Missa quoque est ad me ex notha Anglia radix quam Serpentariæ vocant, vernacule Snagroel cum hac inscriptione. Hæc radix alexiterium præsentissimum est, contra morsum serpentis ingentis pernitiosissimique in notha Anglia, cujus morsus intra duodecim horas interficit, nisi hujus radicis sumatur portio, qua sumpta nullus unquam auditus est periclitari de vita." p. 214.

[a] "Tres radices sub hoc nomine in officinis nostris veniunt, ut nos monuit eruditissimus ille Botanicus *Leonard Plukenetius*, M. D. in literis ad me datis, viz. 1. Aristolochia polyrrhizos, auriculatis foliis Virginiana. *Pluk. Phytog. Tab.* 78. *Almag.* 50. *Tourn. Inst.* 162. *&c.* 2. Aristolochia Violæ fruticosæ foliis Virginiana, cujus radix Serpentaria dicitur. *Pluk. Phytog. T.* 15. *Almag.* 50. *&c.* 3. Aristolochia Pistolochia, seu Serpentaria Virginiana, caule nodoso." This last is the plant we have figured. See Dale, *Pharmacol. p.* 194.

practice appears to be no longer continued, for we have carefully examined several parcels of snake-root, without discovering these roots intermixed with those of the others referred to by Dale. We may notice however, that among these roots, some specimens of the whole plant were found, which differed from the annexed figure, having lance-shaped leaves. And this variety of Serpentaria seems to accord with that noticed by Alston, who says, "the dried specimen I have of the whole plant, brought directly from America by Mr. Richard Lightbody, surgeon, agrees with none of them; (meaning the three mentioned by Dale) the leaves no way resembling a heart at the footstalk, being there all roundish, or obtusely pointed."[b] The plant, from which the present figure was designed, is now growing in the Royal Botanic Garden at Kew, where it was introduced by Mr. William Young about the year 1770.[c]

"Snake-root has an aromatic smell, approaching to that of valerian, but more agreeable, and a warm bitterish pungent taste, which is not easily concealed or overpowered by a large admixture of other materials. It gives out its active matter both to water and rectified spirit, and tinges the former of a deep brown, the latter of an orange colour. Greatest part of its smell and flavour is carried off in evaporation or distillation by both menstrua: along with water there arises, if the quantity of the root submitted to the operation be large, a small portion of pale-coloured essential oil, of a considerable smell, but no very strong taste, greatest part of the camphorated pungency, as well as bitterness of the root, remaining in the inspissated extract. The spirituous extract is stronger than the watery: not so much from its having lost less in the evaporation, as from its containing the active parts of the root concentrated into a smaller volume; its quantity amounting only to about one-half of that of the other."[d]

The root, as we have already observed, was first recommended as

[b] *M. M. vol. i. p.* 521.

[c] We had this information from Mr. Aiton, who desires us to say, that, by mistake, this plant was passed unnoticed in the *Hort. Kew.*

[d] *Lewis, M. M. p.* 602.

a medicine of extraordinary power in counteracting the poisonous effects of the bites of serpents, and it has since been much employed in fevers, particularly those of the malignant kind: a practice which seems founded on a supposition that the morbific matter of these fevers is somewhat analogous to the poison of serpents, and that its influence upon the human system might be obviated by the same means: hence Serpentaria has been considered the most powerful of those medicines termed alexipharmics. Modern physicians however have exploded this theory of antidotes, and the alexiterials and theriacas so industriously studied ever since the first ages of Greece, are now wholly disregarded.

Serpentaria is thought to possess tonic and antiseptic virtues, and is generally admitted to be a powerful stimulant and diaphoretic; and in some fevers where these effects are required, both this and contrayerva have been found very useful medicines, as abundantly appears from the experience of Huxham, Pringle, Hillary, Lysons, and others: yet it may be remarked, that by some of these authors this root has been employed too indiscriminately, for there seems to us some inconsistency in the practice of bleeding and giving snake-root in the same fever.

It is thought by many, that peruvian bark and wine may in every case supersede the use of Serpentaria;[e] but this opinion is also liable to exceptions, as a mixed state of fever has been frequently observed to prevail, in which the bark has proved hurtful, though this root has evidently had a good effect; and even in intermittent fevers the bark has been found more efficacious when joined with Serpentaria than when given alone;[f] and this has been also the case in continued fevers. The dose of snake-root is usually from ten to thirty grains in substance, and to a dram or two in infusion. A tinctura serpentariæ is directed both in the London and Edinburgh Pharmacopœias.

[e] In cases marked with progressive signs of debility and putridity, there cannot be a doubt but that the bark, wine, and a suitable application of cold, are the remedies chiefly to be trusted; but by admitting this, we are not to reject Serpentaria as utterly useless in all fevers.

[f] Vide Lysons, *Practical Essays upon intermitting fevers, p.* 13. *seq.*

Aristolochia longa

Published by Phillips, 6 Fenchurch, Dec.r 1st 1806.

ARISTOLOCHIA LONGA. LONG-ROOTED BIRTHWORT.

SYNONYMA. Aristolochia. *Pharm. Edinb.* Aristolochia longa. *Clus. Hist. ii. p. 70. J. Bauh. Hist. iii. p. 560. Gerard. Emac. p. 846. Raii Hist. p. 762.* Aristolochia longa vera. *Bauh. Pin. p. 307. Park. Theat. p. 291. Tourn. Inst. p. 162. Miller's Fig. tab. 61.*

Sp. Ch. A. fol. cordatis petiolatis integerrimis obtusiusculis, caule infirmo, flor. solitariis.

THE root is perennial, long, tapering, branched, externally wrinkled and brown, internally yellowish: the stems are slender, round, branched, trailing, and usually exceed a foot in length: the leaves are heart-shaped, obtuse, entire, veined, of a pale green colour, and placed alternately upon round footstalks, which are about the length of the leaves: the flowers are solitary, and stand upon peduncles, which arise close to the leaf-stalks: the corolla forms a more regular tube than that of the Serpentaria, and is tongue-shaped at the extremity: the other parts of fructification are similar to those described of Serpentaria. It is a native of the South of Europe, and flowers from June till October.

The medicinal character of Aristolochia was formerly in great repute, and physicians very generally employed various species of the plant. Those received into our pharmacopœias were, 1. Aristolochia longa. 2. A. rotunda. 3. A. tenuis or clematitis of Linnæus. But the roots of these plants have for a long time been gradually falling into disuse, and at present, we believe, are rarely if ever prescribed: they are all expunged from the Mat. Med. of the London Pharmacopœia, but in that of the Edinburgh the last species is still retained, and therefore, according to our plan, it might have been figured here; but as these different species are generally allowed to be similar in their medicinal qualities, we trust

that the first, which is the most rare and curious, will be found the most acceptable to our readers.

All the Birthwort roots have somewhat of an aromatic smell, and a warm bitterish taste. That of the long and round species, on first being chewed, scarcely discover any taste, but in a little time prove nauseously bitter, accompanied with a slight degree of pungency. "They give out their virtue, by infusion, both to spirituous and watery menstrua; to the first most perfectly. In distillation, pure spirit brings over little or nothing: with water there arises, at least from the slender-rooted sort, a small portion of essential oil, possessing the smell and flavour of the roots." [a]

The virtues which the ancients ascribed to Aristolochia were very considerable, and it was consequently employed in various diseases, particularly those thought to proceed from obstructions,[b] more especially of the uterine system:[c] hence the name Aristolochia is said to have arisen from its supposed emmenagogue powers.[d] And as a warm stimulating medicine, Dr. Cullen tells us [e] he found it useful in some cases of retention and chlorosis, but never in cases of suppression. Aristolochia has also been long very generally commended as a remedy for the gout, and it is the first ingredient in the Portland powder,[f] which has been much celebrated for the cure of this disease. It appears however that the long continued use of this powder, which is necessary for preventing the return of arthritic paroxysms, seldom fails to superinduce a premature

[a] Lewis, *M. M. p.* 112.

[b] Fernelius *Method. Med. Lib.* 6. *cap.* 12. *p.* 163.

[c] Hippocr. *De nat. muliebri. p.* 572. *Oper. Fœsii.*

[d] Ab ἄριστος & λοχεια. It has also been derived from Aristolochius, who is said to have first discovered its virtues. [e] See *Mat. Med. vol. ii. p.* 83.

[f] The powder is thus prepared: —— ℞ Aristol. rotund. gentian. summit. et fol. chamædr. chamæpit. centaur. min. ā̄ p. æ. f. pulvis. A dram of this powder is directed to be taken every morning (jejuno ventriculo) for the space of three months, when the dose is to be diminished to three quarters of a dram for the next three months, and afterwards continued for six months in doses of half a dram, which, during the second year is to be taken every other morning.

Aristolochia Clematitis.

Published by Phillips & Fordan June 1st 1807.

senile state of body, and to lay a foundation for more fatal diseases.[g] It is probable that the medicinal qualities of this plant are somewhat allied to those of its congener, the Serpentaria; but the sensible properties of the latter demonstrate it to be a more active medicine.

Aristolochia is given in substance from a scruple to two drams for a dose.

[g] Brunner, *De pancr. p.* 143. *Werlhoff. Caut. Med. Tract. i. p.* 32. See also Cullen's *First* Lin.

ARISTOLOCHIA CLEMATITIS. CLIMBING BIRTHWORT.

SYNONYMA. Aristolochia tenuis. *Pharm. Edinb. Geoff. ii.* 13. *Dalc.* 194. *Alston. i.* 391. *Lewis.* 111. *Murray. i.* 356. *Bergius.* 719. *Edinb. New Disp.* 132. Aristolochia Clematitis recta. *Bauh. Pin.* 307. *Gerard. Emac.* 847. *Park. Theat.* 292. *Raii. Hist.* 762. *Hall. Stirp. Helv. n.* 1029. *Huds. Flor. Ang.* 394. *With. Bot. Arr.* 1003. *Mill. Illust. Eng. Bot.* 398.

Sp. Ch. A. foliis cordatis, caule erecto, floribus axillaribus confertis.

ROOT perennial, cylindrical, long, slender, creeping, fibrous. Stalks simple, slender, striated, two feet in height, round, smooth, in a somewhat zigzag direction. Leaves on footstalks, alternate, smooth, heart-shaped, blunt, of a shining bright green on the upper side, beneath veined. Flowers numerous, at the axillæ of the leaves of a greenish yellow. Calyx none. Corolla monopetalous, tubular, tube nearly cylindrical, at the base round, at the mouth wider, and extended downwards into a long tongue. Filaments none. Antheræ six, growing underneath the stigma. Germen oblong, angular, placed below the corolla. Style very short. Stigma roundish, divided into six portions. Capsule hexagonal, six-celled. Seeds numerous, small, flattish.

It is a native of this country, growing in woods and hedges, and producing its flowers from July till September.

Various species of Aristolochia were formerly included in the Materia Medica, as noticed in the first part of this work; but the Clematitis here figured is the only species still retained in the Edinburgh Pharmacopœia, and therefore ought to have superseded the A. longa, of which a plate is given at page 157.

The root, which is the part medicinally used, has a somewhat aromatic smell, and a warm bitterish taste.

Not only writers on the Materia Medica, but most authors on the practice of medicine, from the remotest times, have ascribed many virtues to the roots of Aristolochia, which it would be useless here to enumerate. The qualities for which they have been chiefly esteemed are sufficiently noticed in the following extract from Dr. Cullen:—

"Which of the species of Aristolochia are to be preferred I cannot "determine, and believe the difference between the rotunda, longa, "and tenuis, is not considerable, though the latter seems now to be "preferred by both the Colleges of London and Edinburgh. They "are all of them considerably bitter, with more acrimony than in "any other of the bitters commonly employed. Its name seems to "have arisen from the supposition of its emmenagogue virtues, "and in some cases of retention and chlorosis, as a warm and "stimulating medicine, I have found it useful; but in cases of "suppression I never found it of any use: and the commendation "of it by the ancients in promoting the lochia, facilitating birth, &c. "is very ill founded. The Aristolochia has been long commended "as a cure for the gout. It makes a considerable part of the "Portland powder,* and has often been employed by itself in the "same manner as that powder, to be taken every day for a length "of time."[a]

But Dr. Cullen thinks with Werlhoff,[b] that though it may prevent the recurrence of the gouty paroxyms, yet the long continued use of such medicines is extremely hurtful, and commonly brings on a general state of disease more fatal than the original distemper.

* For the composition of this powder, see *p.* 158.

[a] *M. M. ii.* 83.

[b] See *Cautiones Medicæ Ed. Wickman. p.* 346.

Smilax Sarsaparilla.

Published by Phillips & Fardon, Jan.ʸ 1.ˢᵗ 1807.

SMILAX SARSAPARILLA. SARSAPARILLA SMILAX.

SYNONYMA. Sarsaparilla. *Pharm. Lond. & Edinb.* Smilax aspera peruviana sive Sarsaparilla. *Bauh. Pin. p.* 296. *Park. Theat. p.* 173. *Raii Hist. p.* 656. *Gerard. Emac. p.* 856. Smilax caule angulato aculeato, foliis ovatis acutis inermibus. *Roy. Lugdb. p.* 228. Smilax viticulis asperis virginiana, folio hederaceo leni Zarga nobilissima. *Pluck. Phytogr. tab.* 111. *f.* 2.

Class Dioecia. *Ord.* Hexandria. *Lin. Gen. Plant.* 1120.

Ess. Gen. Ch. *Masc. Cal.* 6-phyllus. *Cor.* 0.
Fem. Cal. 6-phyllus. *Cor.* 0. *Styli* 3. *Bacca* 3-locularis. *Sem.* 2.

Sp. Ch. S. caule aculeato angulato, foliis inermibus ovatis retuso-mucronatis trinerviis.

THE root is perennial, divided into several branches, which are somewhat thicker than a goose quill, straight, externally brown, internally white, and three or four feet in length: the stalks are shrubby, long, slender, scandent, or trailing, angular, and beset with spines: the leaves are ovate, without spines, pointed, three-nerved, and stand alternately upon footstalks, at the base of which proceed long tendrils: the flowers are male and female on different plants, lateral, and usually stand three or four together upon a common peduncle: the calyx of the male flower is bell-shaped, divided into six segments, which are oblong, spreading, and reflexed at their points: the filaments are six, simple, and furnished with oblong antheræ: the calyx of the female flower is similar to that of the male: there is no corolla, unless the calyx be considered as such: the germen is ovate, and supports three minute styles, furnished with oblong reflexed hairy stigmata: the fruit is a round three-celled berry, containing two globular seeds.

This plant is a native of America, and flowers in July and August. According to Mr. Aiton it was first cultivated in this country by Mr. Forster in 1691.[a]

Though this is the plant which is considered by Linnæus as furnishing the officinal Sarsaparilla, yet there are other writers who contend that this medicine is the root of the Smilax aspera L. which is said to correspond with the Sarsaparilla in every respect.[b] Sir William Fordyce, who has investigated the subject, says, "Prosper Alpinus has put it beyond all doubt, by the appearance of the smilax aspera, which he found in soft grounds in the island of Zant, (Zacynthus) that Europe, and the Grecian islands in particular, furnish the true Sarsaparilla, or *Smilax aspera peruviana dicta* of C. Bauhine."[c] But this synonym is referred to the Smilax Sarsaparilla by Linnæus, whose authority we have followed, along with Murray and Bergius, in preference to that of Alpinus. Besides it may be remarked, that in Spain, Italy, and other parts of Europe, where the Smilax aspera grows in abundance, the American Sarsaparilla is still employed, and imported at a great expence. It is probable however that these two species of the same genus, and of the same subdivision of *caule aculeato, angulato,* may have roots of similar appearance and properties: we have already noticed that not only different species, but even different genera in some instances, produce the same drug.

"This root has a farinaceous somewhat bitterish taste, and no smell. To water it communicates a reddish brown, to rectified spirit a yellowish red tincture, but gives no considerable taste to either menstruum. An extract, obtained by inspissating the spirituous tincture, has a weak somewhat nauseous balsamic bitterness, which is followed by a slight but durable pungency. The watery extract is much weaker, and in larger quantity."[d]

Sarsaparilla was more than two centuries ago introduced into

[a] Vide *Hort. Kew.*

[b] See *P. Alpinus Plant. Ægypt. p.* 136. Also Fallopius, Amatus Lusitanus, Guilandinus, Tobias Aldinus, Monardes, &c. who all either think it the same, or of equal efficacy.

[c] See *Med. Obs. & Inq. vol. i. p.* 173. [d] *Lewis M. M. p.* 586.

Spain [e] as an undoubted specific in syphilitic disorders, and was also celebrated as a medicine in some other diseases of the chronic kind. But whether it was owing to a difference of climate, or other causes, European practitioners soon found that it by no means answered the character which it had acquired in the Spanish West Indies, and therefore it became very much neglected. Many physicians however still consider the Sarsaparilla to be a medicine of much efficacy; and though they admit that by the use of this root alone we are not to expect a cure of the lues venerea, yet they assert that when it is given along with mercury, the disease is much sooner subdued; and that ulcers, nodes, and other symptoms of this disorder, which resisted the effects of repeated salivations, have afterwards disappeared by the continued use of Sarsaparilla. In proof of this, we find several cases related by the late Sir William Fordyce:* but it may be remarked, that ulcers, and other complaints, which continue after a properly conducted course of mercury, are often rather to be considered as the vestiges of the lues than the actual disease, and consequently any other medicine possessing no antivenereal power, but improving the general habit of body, might be employed with equal success. Admitting this, however, is not denying the utility of Sarsaparilla, which has been decidedly done by a late ingenious professor.[f] It is in frequent use at most of the London hospitals, and we have known patients, after the use of mercury, much sooner restored to health by this root than in our opinion could have been accomplished by any other medicine with which we are acquainted, especially when employed in powder.

This root is also recommended in rheumatic affections, scrophula, and cutaneous complaints, or where an acrimony of the fluids prevail. It may be given in decoction or powder, and should be continued in large doses for a considerable time.

[e] Bauhine states its first introduction into Spain to be about the year 1573. But Monardes informs us, that it was brought from New Spain to Madrid twenty or thirty years before this time. The word Sarsaparilla is of Spanish origin. "*Zarsa* siquidem Hispanis rubrum; parra autem vitem, & parilla viticulam significat." — *C. Bauh. l. c.* * *L. c.* [f] *Dr. Cullen.*

SMILAX CHINA. CHINESE SMILAX.

SYNONYMA. *China* (radix). *Pharm. Geoff. V. 2. p. 30. Dale.* 167. *Alston. i.* 409. *Lewis.* 226. *Edinb. New Dispens.* 170. *Murray. i.* 339. *Bergius* 803. China vulgaris off. *Ger. Emac.* 1618. *Bauh. Pin.* 296. *Park. Theat.* 1578. *Ray. Hist.* 657. Smilax minus spinosa, fructu rubicundo, radice virtuosa China dicta. *Kæmpf. Amœn.* 781. *t.* 782. Conf. Sam. Gottl. Gmelin's *Reise durch Russland. T. iii. p.* 32. *t.* 36.

Sp. Ch. S. caule aculeato teretiusculo, fol. inermibus ovato-cordatis quinquenerviis.

ROOT perennial, ligneous, beset with irregular knobs; externally of a reddish brown colour, internally paler. Stems long, roundish, slender, jointed, woody, prickly, climbing, branched, furnished with claspers. Leaves smooth, ovate, or heart-shaped, pointed, five nerved, placed on footstalks. Flowers male and female on different plants, in clusters, of a yellowish white, upon a slender common footstalk, arising at the axillæ of the leaves. The calyx of the male flower is divided into six leafits, which are oblong, reflexed, and appear to occupy the place of the corolla, which is wanting. Filaments six, simple, furnished with oblong antheræ. The female flower differs from the male, in having no stamina, but is supplied with an ovate germen, supporting three minute styles, terminated by oblong reflexed downy stigmata. Fruit a small round berry, of three cells; when ripe of a red colour, and contains two round seeds.

This species of Smilax is tolerably well described by Kæmpfer and Rumphius, but still more fully by Gmelin. It is a much taller shrub than the S. Sarsaparilla, and grows to the greatest perfection in China, Japan, and in some parts of Persia, It is also a native of Jamaica, but the occidental species has been accounted less effica-

Smithson Tennant.

Published by Phillips & Fardon, Jan.ʸ 1.ˢᵗ 1807.

clous than the oriental. Mr. Aiton informs us, that it was first cultivated in Britain by Miller: it seems however to be a tender plant, and is rarely brought to flower in this country, even when placed in the best stoves, and under the direction of the most scientific gardeners.

According to Lewis, "two sorts of the roots are common in the shops, an oriental, and occidental; the first, which is accounted the best, is considerably paler coloured, and harder than the other. Of either kind, such should be chosen, as is fresh and heavy, and which, when cut, exhibits a close smooth glossy surface."

"These roots have scarcely any smell, or particular taste; when fresh they are said to be somewhat acrid, but as brought to us they discover, even when long chewed, no other than a slight unctuosity in the mouth. Boiled in water they impart a reddish colour, and a kind of vapid softness: the decoction, inspissated, yields an unctuous farinaceous almost insipid mass, amounting to upwards of half the weight of the root."[a]

About the year 1535 this root was first brought to Europe with the character of being an incomparable medicine for the cure of the venereal disease.[b] For this purpose it was given in the form of a decoction, of which a large cupful was ordered to be made hot, and taken by the patient every morning while in bed, in order to produce a diaphoretic effect for two or three hours.

This, and the occasional use of purgatives, was to be pursued for twenty-four days, after which the decoction was to be used as a common drink.[c]

This root was also recommended in many other disorders, especially those of a chronic and inveterate kind, as some cutaneous diseases, obstructions, rheumatisms, &c. But whatever may have been the opinion formerly entertained of the efficacy of China root,

[a] Lewis. *l. c.*

[b] Thevet. *Cosmogr. univers. L.* 11. *c.* 25.

[c] Vesalius. *Epist. de rad. chinæ in Aphor. p.* 598. *&c.* Astruc. *de morb. ven. p.* 112.

physicians, at this time, agree in considering it as a very inert substance, and therefore it is rarely employed. Like the sarsaparilla, by which it has been superseded, it contains a considerable share of bland nutritive matter, and appears to us not less adapted to the auxilliary purposes of medicine.

RUSCUS ACULEATUS. BUTCHER's BROOM, or KNEE HOLLY.

SYNONYMA. Ruscus. *Pharm. Geoff.* *Dale.* 169. *Alston. i.* 386. *Lewis.* 546. *Murray. i. p.* 341. *Bergius.* 816. *Edinb. New Dispens.* 267. *Bauh. Pin.* 470. *Ger. Emac.* 907. *Park. Theat.* 253. *Raii. Hist.* 664. *Synop.* 262. *Hudson. Flor. Ang.* 437. *Haller. Hist. Stirp. Helv. n.* 1238. *With. Bot. Arr.* 1132. *Miller. Illust. t.* 155. *Eng. Bot.* 560.

Dioecia Syngenesia. *Lin. Gen. Plant.* 1139.

Gen. Ch. *Masc.* *Cal.* 6-phyllus. *Cor.* 0. *Nectarium* centrale, ovatum, apice perforatum.

Fem. Calyx, Corolla, et *Nectarium* maris. *Stylus* 1. *Bacca* 3-locularis. *Sem.* 2.

Sp. Ch. R. foliis supra floriferis nudis.

A SMALL evergreen shrub, seldom much exceeding a foot in height. Stalk strong, smooth, channelled. Leaves floriferous, sessile, or on very short footstalks, ovate, rigid, sharply pointed,[a] entire, marked with numerous parellel veins. Flowers male and female on

[a] Hence Virgil says, "Horridior rusco." Ec. 7. V. 41.

And again

——— aspera rusci
Vimina per silvam, ———

Rubus arcticus.

Published by Phillips & Fardon, Jan.y 1st 1807.

Cissampelos Pareira

Published by Phillips & Fordan, June 1st 1807.

different plants, solitary, appearing on the upper disc of the leaves. Calyx of the male flower composed of six small oval spreading leaves, of a yellowish green. Corolla none. Nectarium egg-shaped, inflated, upright, purple, open at the rim, of the length of the calyx. Filaments none. Antheræ three, expanding, uniting at the base, placed at the mouth of the nectarium. In the female flower the germen is oblong, enclosed in the nectarium, supporting a cylindrical style, supplied with a blunt stigma. Fruit a three-celled red berry, containing two globular seeds.

It usually grows in woods and thickets, flowering in March and April.

The root, which is somewhat thick, knotty, and furnished with long fibres, externally brown, internally white, and of a bitterish taste, has been recommended as an aperient and diuretic in dropsies, urinary obstructions, and nephritic cases. Hence it has been termed one of the five greater aperient roots.

It is manifestly the μυρσινη αγρια of Dioscorides,[b] who speaks highly of its deobstruent and diuretic powers; and Riverius relates a case of dropsy successfully treated by a decoction of the roots of Ruscus; but at present this plant is very rarely, if ever, employed in medicine.

[b] *Lib.* 4. *c.* 146.

CISSAMPELOS PAREIRA. PAREIRA BRAVA CISSAMPELOS.

SYNONYMA. Pareira brava. *Pharm. Lond.* Clematis baccifera glabra et villosa, rotundo & umbelicato folio. *Plumier, Plantes de l'Amer.* 78. *t.* 93. *Sloane's Jamaica, vol. i. p.* 200. *Cat.* 85. Caapeba folio orbiculari umbelicato & tomentoso. *Plum. Gen.* 33. Cissampelos scandens, foliis peltatis orbiculato-cordatis villosis; floribus masculinis racemosis, femininis spicatis, spicis foliolatis. *Browne's Jamaica, p.* 357.

Class Dioecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1138.

Ess. Gen. Ch. *Masc. Cal.* 4-phyllus. *Cor.* 0. *Nectarium* rotatum. *Stam.* 4: filamentis connatis.

Fem. Cal. monophyllus, ligulato-subrotundus. *Cor.* 0. *Styli* 3. *Bacca* 1-sperma.

Sp. Ch. C. foliis peltatis cordatis emarginatis.

THE root is perennial, long, thick, woody, composed of distinct fibres, of a dull yellowish hue, and covered with furrowed bark of a brown colour: the stalks are numerous, shrubby, slender, very long, covered with a whitish bark, and climb round the neighbouring trees for support:[a] the leaves are roundish, indented at the top, about an inch and a half long, two inches broad, entire, covered with soft downy hairs,[b] and hang upon round simple downy footstalks, which are inserted into the back of the leaf: the flowers are extremely minute, of a greenish colour, placed in clusters upon long axillary spikes, and are male and female in different plants: the calyx of the male flower is divided into four small oval segments: it has no corolla, but the nectary is wheel-shaped and membranous: the filaments are four, very small, united, and furnished with broad flat antheræ: of the female flower the calyx is strap-shaped or ligulated: the germen is roundish, and supports three short styles, furnished with pointed stigmata: the fruit is a small one-celled berry, containing a roundish rough compressed seed. It is a native of South America and the West Indies.

The plant, which we have here represented, was drawn from a dried specimen in the possession of Mr. Aiton at Kew, to which a separate display of the parts of fructification was intended to have

[a] In Jamaica "this plant grows in great plenty, commonly amongst the ebony trees, climbing about them." *Long's Jam. vol. iii. p.* 760.

[b] From this villous covering of the leaf, it is usually called *Velvet leaf*.

been introduced, but from their extreme minuteness and dryness it was found to be impracticable: the general appearance of the plant is however so characteristic as in some measure to compensate for this deficiency.

The medicinal use of the roots of this plant was first learned from the Brazilians, who infused them in water, which they drank freely in all obstructions in the urinary passages;[c] and towards the end of the last century these roots were brought into Europe by the Portuguese, who recommended them to physicians as the most effectual remedy hitherto discovered in all calculous and gravelly complaints; and various accounts of their efficacy were soon after published.[d] This root "has no remarkable smell; but to the taste it manifests a notable sweetness of the liquorice kind, together with a considerable bitterness, and a slight roughness covered by the sweet matter. It gives out great part both of the bitter and sweet substance to watery and spirituous menstrua: in evaporating the watery decoction a considerable quantity of resinous matter separates, which does not mingle with the remaining extract, nor dissolve in water, but is readily taken up by spirit; whence spirit appears to be the most perfect dissolvent of its active parts. Both the spirituous tincture and extract are in taste stronger than the watery."[e]

The facts adduced on the utility of radix pareiræ bravæ in nephritic and calculous cases, are principally those by Helvetius,

[c] According to Browne, it is still used with this intention by the negroes at Jamaica. Vide l. c.

[d] "Parisios per Regis Galliæ legatum, *Amelot*, a. 1688. pervenit (Hist. de l'Acad. des Scien. de Paris, 1710, p. 56.) tumque varii medici Galli ejus usum fecere, interque nos *Helvetius*, qui in *Traité des maladies les plus frequentes et des remedes specifiques*, ejus mentionem aliquoties honorificam injicit." In Germania nondum initio seculi famam excitaverat, sed multum ibidem ad ejusdem existimationem contulit Lochnerus (*Schediasma de Pareira brava Norimb.* 1719. *Ed.* 2. *in* 4.) casibus potius distincte prolatis, quam luxuriantis eruditionis ornamentis, quibus obvelantur." Vide *Murray Ap. Med. v. i.* 345.

[e] *Lewis Mat. Med. p.* 480.

Geoffroy, and Lochner:[f] the first seems to think that it acts as a lithontriptic, but Geoffroy attributes its virtues to its power of dissolving the indurated mucus to which the sabulous matter adheres. It has also been recommended in ischuria, ulcers of the bladder, fluor albus, rheumatism, jaundice, asthma, and some other chronic diseases. The accounts given of the successful employment of this root by the French writers, induced physicians to try its effects in this country; but we find no remarkable instances of its efficacy recorded by British practitioners; and as a proof of its being fallen into disrepute, the Edinburgh College has expunged it from the Materia Medica.[g] The dose of the powdered root is from one scruple to two. Geoffroy directs two or three drams of the root to be bruised and boiled in a pint and a half of water till only a pint remains, which is to be divided into three doses.

[f] *Lewis. Mat. Med.* l. c. in note ([d])

[g] And Bergius says, "Certe vidi ego calculosos, arthriticos & rheumaticos plures, qui satis diu usum ejus absque successu continuarunt." *Mat. Med. p.* 815.

ASARUM EUROPÆUM. COMMON ASARABACCA.

SYNONYMA. Asarum. *Pharm. Lond. & Edinb. Bauh. Pin. p.* 197. *Gerard. Emac. p.* 836. *J. Bauh. Hist. vol. iii. p.* 548. *Ray Hist. p.* 207. *Synop. p.* 158. Asarum vulgare. *Park. Theat. p.* 366. Asarum foliis reniformibus subhirsutis. *Hall. Stirp. Helv. n.* 1847. Asarum Europæum. *Withering. Bot. Arrang. p.* 488. *Smith Brit.* 509. *Flor. Dan.* 633.

Class Dodecandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 589.

Ess. Gen. Ch. *Cal.* 3-s. 4-fidus, germini insidens. *Cor.* 0. *Caps.* coriacea, coronata.

Sp. Ch. A. foliis reniformibus obtusis binis.

60.

Asarum europæum

Published by Phillips & Fardon, Feb.ry 1st 1807.

THE root is perennial, strong, divided and fibrous: it has no stalk, so that the leaves rise immediately from the root; they grow in pairs, are kidney-shaped, large, of a deep shining green colour, and stand upon long footstalks: the flowers are large, bell-shaped, of a dirty purple colour, and placed singly upon short peduncles at the base of the footstalks: the calyx supplies the place of a corolla, and is large, bell-shaped, divided at the mouth into three or four pointed segments, which are of a brownish purple colour, but towards the base it is greenish: the filaments are twelve, about half the length of the calyx, and furnished with oblong antheræ, which are attached to the sides of the filaments: from the germen arises a simple style, crowned with a stigma, divided into six radiated reflected parts: the capsule is of a leathery texture, and divided into six cells, which contain several small oblong seeds. It is a native of England,[a] and flowers in May.

It appears from Pliny,[b] that by the Ancients the name of this plant was frequently confounded with that of nardus and baccharis; and the English name Asarabacca has been derived from the words asarum and baccharis: it is evident however that the plants, now known by these names, differ very considerably both in their appearance and effects.

" The leaves and roots of Asarum have a moderately strong and not very unpleasant smell, somewhat resembling that of valerian or nard,† and a nauseous bitterish acrid taste:"[c] they seem to agree also in their medicinal effects, both proving strongly emetic and cathartic: the root has been observed to excite vomiting so constantly, that it is proposed by Linnæus as a substitute for ipecacuanha;[d] and Dr. Cullen says, " the root dried only so much as to

[a] It is extremely scarce. Ray observes it is found in some woods in Lancashire. l. c.

[b] *His. Nat. L. xii. c.* 13. *et L. xxi. cap.* 6.

Asaron, ab α *priv.* & σαίρω *orno*, quoniam in coronis non addatur.

† Nardus Celtica L.

[c] *Lewis M. M. p.* 122.

[d] *Am. Acad. T.* 7. *p.* 307. where it is also observed, that when exhibited in a state of *very fine powder*, it uniformly acts as an emetic, but when *coarsely powdered* it always passes the stomach and becomes cathartic.

be powdered proves, in a moderate dose, a gentle emetic. It will commonly answer in doses of a scruple, sometimes in a less quantity," " and as we judge may be suited to many of the purposes of the ipecacuanha."[e] In small doses it is said to promote perspiration, urine, and the uterine flux.[f] Spirituous tinctures and watery infusions of the plant possess both its emetic and cathartic virtues, but it is said that by coction in water the emetic power is first destroyed, and afterwards the purgative.[g] At present Asarum is seldom given internally, as the evacuations expected from its use may be procured with more certainty and safety[h] by various other medicines, that it is now chiefly employed as an errhine or sternutatory, and is found to be the most useful and convenient in the Mat. Med. For this purpose the leaves, as being less acrid than the roots, are preferred by the College, and in moderate doses, not exceeding a few grains, snuffed up the nose several successive evenings, produce a pretty large watery discharge, which sometimes continues for several days together, by which headach, toothach, opthalmia, and some paralytic and soporific complaints, have been effectually relieved. It is the basis of the pulv. sternutatorius, or pulvis asari compositus.

[e] *Mat. Med. vol. ii. p. 473.*

[f] " Diureticum & emmenagogum insigne: unde Meretriculæ plus satis frequentant decoctum ejus, cum sentiunt se gravidas. Quò tenuiùs est tritum eò magis urinas movere, minus autem alvum ducere, creditur." *Ray Hist. p.* 208. [g] *Raii l. c.*

[h] Ante aliquot annos civis hujus loci, vir quadratus, difficulter mobilis, sumit, suasu aniculæ, pulverem asari foliorum & radicis ad integrum cochlear. Inde verò hypercatharsin patiebatur lethalem," &c. *Wedelius Amœnit. M. M. p.* 240. *& De Med. fac.*

Rubia tinctorum

Published by Phillips & Fogden, Feb.ry 1st 1807.

ORD. IX. STELLATÆ.

From *Stella*, a star where the leaves surround the stem like the radii of a circle.

RUBIA TINCTORUM. DIER's MADDER.

SYNONYMA. Rubia. *Pharm. Lond. & Edinb.* α Rubia sylvestris aspera. β Rubia tinctorum sativa. *Bauh. Pin. p.* 333. Rubia tinctorum. *Gerard. Emac. p.* 1118. Rubia major sativa. *Park. Theat. p.* 274. Rubia sylvestris monspessulana major. *J. Bauh. Hist. vol. iii. p.* 715. Rubia tinctorum. *Raii Hist. p.* 480. *Vide Hall. Stirp. Helv. n.* 708. Rubia foliis senis. *Miller's Dict.* Ερυθροδανον vel Ερευθοδανον *Græcorum.*

Class Tetrandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 127.

Ess. Gen. Ch. *Cor.* 1-petala, campanulata. *Baccæ* 2, monospermæ.

Sp. Ch. R. foliis annuis, caule aculeato. *Mant.* 330.

THE root is perennial, long, round, jointed, beset with small fibres, externally of a bright red colour, but towards the center yellowish: the stalks are quadrangular, slender, procumbent, jointed, four or five feet in length, and covered with rough short points, by which they adhere to the neighbouring plants for support: the leaves are elliptical, pointed, rough, ciliated, and are placed in whorls of four, five, or six together at the joints of the stem: the

branches stand in pairs at the articulations of the stalk, and upon their various subdivisions produce small terminal flowers of a yellow colour: the calyx is divided at the mouth into four teeth: the corolla is small, bell-shaped, and cut at the extremity into four oval segments: the filaments are four, short, and support simple erect antheræ: the germen is double, and placed below the corolla: the style is slender, and at the top divides into two globular stigmata: the fruit consists of two round berries, each containing an oval seed, with a cavity at its smaller extremity. It is a native of the South of Europe, and flowers in June.

Madder is frequently mentioned by the Greek writers, who employed its roots with the same medicinal intentions for which they now are recommended by most of the modern writers on the Materia Medica. Our knowledge of the first cultivation of this plant in England is from Gerard;[a] and though an extensive cultivation of Madder in Britain seems to promise considerable advantage both to the planter and to the nation, yet we find that the great quantity of Madder roots used here by the Diers and Callico-printers, has been for many years almost wholly the growth and export of Holland.[b] Madder appears to differ from other substances used for the purpose of dying, in having the peculiar property* of tinging with a florid red colour not only the milk, urine, &c.[c] but even the bones of those animals which have fed upon it; a circumstance

[a] Vide *Hort. Kew.* [b] *Miller Dict.* in which is also given a full account of the cultivation of this plant. But we are happy to observe, that by the laudable endeavours of the *Society for the Encouragement of Arts*, &c. considerable quantities of English Madder have been produced, and found as good at least, if not better than any imported. *See Transactions, p.* 10. *vol. i.*

* Some other plants of the same natural order *(Stellatæ)* have also the effect of tinging the bones, as the Galium *Mollugo* and *Aparine*. Vide Guettard *Mem. de l'Ac. de Sc. a.* 1746 & 747. And the Valantia *cruciata*. *Böhmer Diss. de rad. rub. tinct. p.* 42.

[c] *Böhmer* also found the serum of the blood reddened by the Madder. *Diss. rad rub. tinct. &c. p.* 13. And *Levret* observes, that it sometimes tinged the excretion by the skin. *Sur les Accouchemens, p.* 278.

which was first noticed by Antonius Mizaldus,[d] but not known in England till Mr. Belchier published an account of a pig and a cock, whose bones became red by eating Madder mixed with their food;[e] since that time various experiments relating to this subject have been made, from which it appears that the colouring-matter of Madder affects the bones in a very short time, and that the most solid, or hardest, part of the bones first receives the red colour, which gradually extends, *eb externo*, through the whole osseous substance, while the animal continues to take the Madder; and if this root be alternately intermitted and employed for a sufficient length of time, and at proper intervals, the bones are found to be coloured in a correspondent number of concentric circles. According to Lewis, "the roots of Madder have a bitterish somewhat austere taste, and a slight smell not of the agreeable kind. They impart to water a dark red tincture, to rectified spirit, and to distilled oils, a bright red; both the watery and spirituous tinctures taste strongly of the Madder."[f]

Madder, by medicinal writers, has been considered as a deobstruent, detergent, and diuretic, and is chiefly used in the jaundice, dropsy, and other diseases supposed to proceed from visceral obstructions, particularly those of the liver and kidneys; and some modern authors have recommended it as an emmenagogue,[g] and in rickety affections.[h] With regard to its diuretic quality, for which there are many respectable authorities, Dr. Cullen asserts, that in many trials both for this and other purposes, such an effect is not constant, having never occurred to him. As a remedy for the jaundice, it has the authority of Sydenham, and was formerly an ingredient in the decoctum ad icteros of the Edin. Pharm. but as it seemed more adapted to the *fæces albidæ* than to the disease itself,

[d] *Memorab. ut. ac jucunda Cent.* 7. *Aph.* 91. *Lutet.* 1566.

[e] *Phil. Trans. vol.* 39. *p.* 287. *& p.* 299. See also *vol.* 41. Afterwards experiments were prosecuted by *Bazanus*, *Geoffroy*, *Du Hamel*, *Fougeroux*, *Bergius*, and others.

[f] *Mat. Med. p.* 546. [g] See *Home's Clinical Experiments*, *p.* 388. [h] *Levret. l. c.* and *Alii.*

this decoction was expunged. That some French writers should prescribe Madder in a rickety state of the bones, appears a little surprising, as the brute animals, to which it was given, especially the younger, suffered considerable emaciation and prostration of strength from its effects. Its virtues, as an emmenagogue, rest principally on the authority of Dr. Home, who gave from a scruple to half a dram of the powder, or two ounces of the decoction, three or four times a day. But this medicine failed with Dr. Cullen, who also says, "I know of other practitioners in this country, who, after several ineffectual trials made with it, have now entirely deserted its use."[i]

[i] *Mat. Med. vol. ii. p.* 39.

GALIUM APARINE. CLEAVERS, or GOOSE GRASS.

SYNONYMA. Aparine. *Pharm. Murray. vi.* 24. *Dale.* 133. *Rutty.* 321. Aparine vulgaris. *Bauh. Pin.* 334. Aparine. *Ger. Emac.* 1122. *Park. Theat.* 567. *Ray. Syn.* 225. Galium caule serrato, foliis senis linearibus lanceolatis serratis, petiolis unifloris. *Hall. Hist. Stirp. Helv. n.* 723. Galium Aparine. *Scop. Fl. Carn. n.* 157. *Hudson. Flor. Ang.* 57. *Withering. Bot. Arr.* 157. *Lightfoot. Flor. Smith Brit.* 180. *Scot.* 117. *Flor. Dan. Icon.* 495. *Curt. Flor. Lond.*

Tetrandria Monogynia. *Lin. Gen. Plant.* 125.

Gen. Ch. *Cor.* 1-petala, plana. *Sem.* 2, subrotunda.

Sp. Ch. G. foliis octonis lanceolatis carinatis scabris retrorsum aculeatis, geniculis villosis, fructu hispido.

Galium Aparine

Published by Phillips & Fardon, Feb.ry 1st 1807.

ROOT branched, fibrous, annual. Stalk quadrangular, three or four feet in height, weak, climbing, jointed branched: angles beset with short prickles, which are bent backwards, and fasten hold of neighbouring plants. Leaves standing at the joints of the stalk six or eight together, lanceolate, narrow, finely pointed, on the upper side rough, with sharp prickles. Flowers small, white, on rough footstalks. Calyx none. Corolla very small, wheel-shaped, divided into four oval pointed segments. Filaments four, white, shorter than the corolla. Antheræ yellow. Germen below the corolla, double, rough. Styles two, short. Stigmata globular. Fruit two dry roundish berries, slightly adhering together, covered with hooked prickles. Seeds solitary, kidney-shaped.

It is common in cultivated ground and hedges, producing its flowers from June till September.

This succulent plant is destitute of odour, but to the taste it is bitterish, and somewhat acrid. Dioscorides[a] speaks of an ointment made of the bruised herb, mixed with lard, as an useful application to discuss strumous swellings; and Gaspari,[b] an Italian, adopted a similar practice with great success. He also informs us, that a decoction of the plant, employed in the way of fomentation, was found to be very efficacious in swellings of the glands of the neck, which followed a certain epidemic at Verona. Dr. Cullen, however, relates that he tried the Aparine in some glandular indurations, but without deriving any advantage.[c]

It is said by Mayerne, that three ounces of the juice of the plant, taken twice a day in wine, were experienced to be an useful aperient and diuretic in incipient dropsies. But the character in which the Aparine has of late been chiefly esteemed, is that of an antiscorbutic; for this purpose, a tea-cupful of its expressed juice is to be taken every morning for nine or ten days. When the fresh plant cannot be procured, it may be used in a dried state as tea.[d]

[a] *M. M. Lib. 3. cap.* 104.

[b] See *Osservazioni Storiche, Mediche, &c.* 1731. *p.* 17. [c] *M. M. vol.* 2. *p.* 37.

[d] See *Med. & Philos. Commentaries, vol.* 5. *p.* 326. Also Edward's *Treatise on the Goose-grass, or Clivers, and its efficacy in the cure of the most inveterate Scurvy.*

Other species of Galium have been used for the purposes of medicine, especially the G. verum, or yellow lady's bed-straw, the flowers of which have been recommended in hysteric and epileptic complaints. It has been asserted, that these flowers contain an acid, which coagulates milk; but neither Bergius, Cullen, nor Young, observed this effect from them, after repeated trials.

SPIGELIA MARILANDICA. PERENNIAL WORM-GRASS, Or, INDIAN PINK.

SYNONYMA. Spigelia. *Pharm. Lond. & Edinb.* Periclymeni virginiani flore coccineo planta marilandica, spica erecta, foliis conjugatis. *Catesby Carol. vol. ii. p.* 78. Lonicera *marilandica* spicis terminalibus, foliis ovato-oblongis acuminatis distinctis sessilibus. *Sp. Plant. p.* 249. Spigelia marilandica fol. ovatis oppositis spica secunda terminali. *Walter Flor. Carol. p.* 92. Vide *Mantiss. Lin. ii. p.* 338. *Ess. & Obs. Phys. & Lit. vol. iii. p.* 151. *Curt. Bot. Mag.* 80.

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 209.

Ess. Gen. Ch. *Cor.* infundibulif. *Caps.* didyma, 2-locularis, polysperma.

Sp. Ch. S. caule tetragono, foliis omnibus oppositis.

THE root is perennial, unequal, simple, sends off many slender fibres, and grows in an horizontal direction: the stalk is simple, erect, smooth, obscurely quadrangular, of a purplish colour, and commonly rises above a foot in height: the leaves are ovate, sessile, somewhat undulated, entire, of a deep green colour, and stand in pairs upon the stem: the flowers are large, funnel-shaped, and terminate the stem in a spike: the calyx divides into five long

Fuchsia magellanica

narrow pointed smooth segments: the corolla is monopetalous, consisting of a long tube, gradually swelling towards the middle, of a bright purplish red colour, and divided at the mouth into five pointed segments, which are yellow on the inside: the five filaments are about the length of the tube, and crowned with halberd-shaped antheræ: the germen is small, ovate, placed above the insertion of the corolla, and supports a round style, which is longer than the corolla, furnished with a joint near its base, and bearded towards the extremity, which is supplied with an obtuse stigma; the capsule is double, two-celled, and contains many small angular plano-convex seeds. It is a native of America, and flowers in July and August.

Linnæus first supposed this plant to be a Lonicera, or Honeysuckle, but afterwards he ascertained its characters, and called it Spigelia, in honour of the botanist Spigelius, whose first work was published in 1606.*

Two species of Spigelia are now known to botanists, viz. S. Anthelmia and marilandica; they have both been used as anthelmintics; the effects of the former are noticed by Dr. Browne in the Gentleman's Magazine for the year 1751, and in his History of Jamaica;[a] also by Dr. Brocklesby,[b] and several foreign writers. But the accounts of the vermifuge virtues of Spigelia, given by Drs. Linning[c] and Garden,[d] from Charlestown, South Carolina, evidently refer to the latter species, which is here figured; and as the anthelmintic efficacy resides chiefly in the root of the plant, that of the Anthelmia, or Annual Spigelia, which is very small, must be incomparably less powerful than the root of the marilandica, which is perennial. Dr. Garden, in his first letter to Dr. Hope, which was written about the year 1763, says, "About forty years ago, the anthelmintic virtues "of the root of this plant were discovered by the Indians; since "which time it has been much used here by physicians, practitioners, "and planters; yet its true dose is not generally ascertained. I have

* Adriani Spigelii *in rem herbariam Isagoge*, Patavii.

[a] *P.* 156. [b] *Oec. & Med. Observations, p.* 282.

[c] See *Ess. & Observ. Physical & Literary, vol. i. p.* 386. [d] *L. c.*

" given it in hundreds of cases, and have been very attentive to its " effects. I never found it do much service, except when it proved " gently purgative. Its purgative quality naturally led me to give " it in febrile diseases, which seemed to arise from viscidity in the " *primæ viæ;* and, in these cases, it succeeded to admiration, even " when the sick did not void worms.

" I have of late, previous to the use of the Indian Pink, given a " vomit, when the circumstances of the case permitted it; and I " have found this method answer so well, that I think a vomit should " never be omitted. I have known half a dram of this root purge " as briskly as the same quantity of rhubarb; at other times I have " known it, though given in large quantities, produce no effect " upon the belly: in such cases, it becomes necessary to add a grain " or two of sweet mercury, or some grains of rhubarb; but it is to " be observed, that the same happy effects did not follow its use in " this way, as when it was purgative without addition. The addition " however of the purgative renders its use safe, and removes all " danger of convulsions of the eyes,[e] although neither *ol. rutæ, sabinæ,* " or any other nervous substance, is given along with it. It is, in " general, safer to give it in large doses than in small; for, from the " latter more frequently the giddiness, dimness of the sight, and " convulsions, &c. follow; whereas, from large doses, I have not " known any other effect than its proving emetic or violently " cathartic. To a child of two years of age, who had been taking " ten grains of the root twice a-day, without having any other " effect than making her dull and giddy, I prescribed twenty-two " grains morning and evening, which purged her briskly, and " brought away five large worms.[f] After some months an increased

[e] This root, when taken in large doses, and not readily passing off by stool or vomiting, is observed not only to affect the head but in a peculiar way the muscles which move the eyes; an effect which is noticed both by Linning and Garden, and is to be removed by administering a cathartic.

[f] According to Linning, " thirty large worms, the *teretes,* were at once voided" by a Negro girl from the use of this root. *l. c.*

" dose had the same good effects. I prefer the root to the other " parts of the plant, of which, when properly dried, I gave from " twelve to sixty or seventy grains in substance. In infusion it " may be given to the quantity of two, three, or four drams twice " a day. I have found that, by keeping, the plant loses its virtue " in part; for forty grains of the root which has not been gathered " above two months, will operate as strongly as sixty which has " been kept for fifteen months."[g]

In Dr. Garden's subsequent letters, addressed to Dr. Hope in the years 1764 and 1766, the efficacy of this root in worm cases is further confirmed, and he observes, that the root keeps better than he at first thought, having lately used it several years old with great success. In what he calls continued or remitting low worm fevers, he found its efficacy promoted by the addition of rad. sepentar. virg.

[g] As this plant seems to be received into the Materia Medica principally on the authority of Dr. Garden, we have judged it proper to give his account in his own words.

ORD. X. CYMOSÆ.

(Κυμα, fœtus. Cyma, a sprout). In this order the flower is aggregate, having a receptacle divided into primary fastigiate peduncles proceeding from an universal centre; but the secondary peduncles are irregular, which distinguishes this order from the Umbellatæ.

COFFEA ARABICA. COFFEE TREE.

SYNONYMA. Euonymo similis ægyptiaca, fructu baccis lauri simili. *Bauh. Pin.* 498. Coffee frutex, ex cujus fructu fit potus. *Ray. Hist.* 1691. Bon. *Alpin. Pl. Ægypt.* 63. Jasminum arabicum, lauri folio, cujus semen apud nos Coffé dicitur. *Jussieu. Mem. de L'Acad. des Sc. de Paris.* 1713. *p.* 388. *t.* 7. Conf. Monogr. in *Linn. Amoen. Ac. T.* 6. *p.* 160. Also *Ellis. Histor. Account of Coffee.* 1774.

COFFEA (semen) *Pharm. Dale.* 317. *Alston. ii.* 274. *Murray. i.* 386. *Bergius.* 111. *Lewis.* 243. *Edinb. New Dispens.* 174.

Pentandria Monogynia. *Lin. Gen. Plant.* 230.

Gen. Ch. *Cor.* hypocrateriformis. *Stamina* supra tubum. *Bacca* infera disperma. *Sem.* arillata.

Sp. Ch. C. floribus quinquefidis dispermis.

A TREE of low stature, seldom exceeding twelve feet in height, slender, at the upper part sending off long trailing branches: bark brown, and almost smooth. Leaves nearly elliptical, smooth, entire, pointed, waved, three or four inches in length, opposite, on short footstalks. Stipulæ in pairs, pointed. Flowers white, axillary, on short simple peduncles, or sessile, two or three together. Calyx very small, tubular, five-toothed. Corolla monopetalous, funnel-shaped, cut at the limb into five reflexed oval or lanceolate segments: tube long, narrow, almost cylindrical. Filaments five, tapering, inserted at the mouth of the tube: antheræ linear, incumbent, of the length of the filaments. Germen roundish. Style simple, longer than the stamina. Stigma cloven, reflexed. Fruit a round fleshy red berry, containing two seeds, invested by a cartilaginous arillus: the appearance of the seed is well known.

The Coffee tree is a native of Arabia Felix and Ethiopia, and was first noticed by Rauwolfius in 1573; but Alpinus, in 1591, was the first who described it. It was cultivated in Britain by Bishop Compton in 1696,[a] and is now to be found in many of the well stored hot-houses of this country. For the specimen of it here figured we are obliged to Dr. Lettsom, who possesses the best plant of this species which we have seen, and which was highly valved by its late owner Dr. John Fothergill.

The use of Coffee, or the seed of the fruit of this tree, appears to have originated in Ethiopia, but the practice of drinking it in Arabia was introduced from Persia by the Mufti of Aden in the fifteenth century. In 1554 its use first began at Constantinople. From whence it was gradually adopted in the western parts of Europe. At Marseilles it was begun in 1644. At Paris, if we except the family of Mons. Thevenot,[b] it was unknown till the arrival of the Turkish Ambassador, Soliman Aga, in 1669; and in 1672 the first coffee-house was established in Paris by an Armenian, named Pascal, but he met with little encouragement, and therefore

[a] Vide *Douglas. History of the Coffee tree. p.* 21.

[b] This gentleman had resided some time in the East, and returned to Paris in 1657.

came to London, where this beverage had been previously introduced in the year 1652, when Mr. Edwards, a Turkey merchant, brought from that country a Greek servant, of the name of Pasqua, who understood the method of preparing coffee, and first sold it in London in a house which he kept for that purpose, in George-yard, Lombard-street. Eight years after this it contributed to the public revenue, by a duty of four-pence laid upon every gallon made and sold here.[c]

The general consumption of Coffee in Europe suggested the idea of cultivating it for the advantage of commerce; and in this view the Dutch took the lead, and first planted it at Batavia in 1690; and at Surinam in 1718. This example was followed by the French at Cayenne, and in Martinico; nor were our Colonies neglected, for in 1732 it was cultivated in Jamaica, and patronized by act of parliament.

But whether from mismanagement, or from causes unavoidable, it is a lamentable truth, that our colonial coffee is of less estimation than that of other states, and the Mocha coffee is superior to all others. We shall therefore present our readers with an account of the culture and management of Coffee, practised in Arabia Felix, and related by La Roque, who says, "that the Coffee tree is there "raised from seed, which they sow in nurseries, and plant them "out as they have occasion. They chuse for their plantations a "moist shady situation, on a small eminence, or at the foot of the "mountains, and take great care to conduct from the mountains "little rills of water, in small channels, to the roots of the trees; "for it is absolutely necessary that they should be constantly "watered, in order to produce and ripen the fruit. For that pur-"pose, when they remove or transplant the tree, they make a "trench three feet wide, and five feet deep, which they line or "cover with stones, that the water may the more readily sink deep "into the earth with which the trench is filled, in order to preserve "the moisture from evaporating. When they observe that there

[c] See *Ellis, l. c.*

" is a good deal of fruit upon the tree, and that it is nearly ripe, " they turn off the water from the roots, to lessen that succulency " in the fruit which too much moisture would occasion. In places " much exposed to the south they plant their Coffee trees in regular " lines, sheltered by a kind of poplar tree, which extends its " branches on every side to a great distance, affording a necessary " shade when the heat of the sun is too intense. When they per- " ceive the fruit advanced to maturity, they spread cloths under " the trees, which they shake, and the ripe fruit readily drops off. " They afterwards spread the berries upon mats, and expose them " to the sun until they are perfectly dry: after which they break " the husk with large heavy rollers, made either with wood or " stone. When the Coffee is thus cleared of its husk, it is again " dried in the sun, and lastly winnowed with a large fan."[d]

Both the outer pulpy part of the berry, and the inner membrane immediately investing the seed, are prepared for use by the Arabians; the former is much esteemed, and constitutes the Coffee *â la Sultane*; the latter is chiefly employed by the common people, and sold under the name of *Kischer*.[e] The seeds used by us, and which by the Arabians are thought too heating, are principally imported into Europe from Yemen, where the Coffee is most abundantly cultivated; they are smaller than the other kinds produced in the Colonies, of a yellow hue, and more grateful in taste and odour. The manner of roasting and preparing Coffee for use is too well known to require being detailed here; we shall therefore proceed to consider its effects on the human body.

From various experiments instituted by Dr. Percival upon Coffee, he infers that this beverage " is slightly astringent and antiseptic; " that it moderates alimentary fermentation, and is powerfully seda- " tive. Its action upon the nervous system probably depends on " the oil it contains; which receives its flavour, and is rendered

[d] See *La Roque. Voyage de l'Arabie heureuse. p.* 285. of which we have followed Ellis's translation.

[e] *Braad, Niebuhr, Aublet, &c.*

" mildly empyreumatic by the process of roasting. The medicinal " qualities of Coffee seem to be derived from the grateful sensation " which it produces in the stomach, and from the sedative powers " it exerts on the *vis vitæ*. Hence it assists digestion, and relieves " the head-ach; and is taken in large quantities with peculiar pro- " priety by the Turks and Arabians, because it counteracts the " narcotic effects of opium, to the use of which those nations are " much addicted. In delicate habits it often occasions watchfulness, " tremors, and many of those complaints which are denominated " nervous. It has been even suspected of producing palsies; and " from my own observation, I should apprehend not entirely with- " out foundation. Slare affirms that he became paralytic by the too " liberal use of Coffee, and that his disorder was removed by ab- " stinence from that liquor."[f]

Dr. Percival cites a letter from Sir John Pringle, who asserts that strong Coffee is the most powerful remedy, with which he is acquainted, in abating spasmodic asthma.

The late Dr. Fothergill has observed, that "it is a question often proposed to physicians, which is best Tea or Coffee?" The solution of this point would perhaps be a difficult one. We neither find the Chinese or Turks subjected to any such discriminating effects as to enable the faculty to say, with precision, that one is more injurious than the other; for my own part I leave it to the experience of individuals. Dr. F. recommends the Coffee to be made strong, and as much boiled milk to be added to it before it is taken from the fire as there is water; it is then suffered to settle, and drunk either with or without cream. This the Dr. substituted for tea, which was not quite favourable to his health.

The French custom of drinking Coffee immediately after dinner, is certainly much better than that which prevails with us of taking it at a late hour in the evening. For, from the observations of Dr. Percival, and indeed from the experience of mankind in general, this beverage very commonly suspends the inclination to sleep, and

[f] See *Essays, vol. ii.*

therefore may protract the time of watchfulness beyond the usual hour of rest. By habit, however, these and other unfavourable effects both of Coffee and tea, are often subdued, though certain constitutions may suffer much in the struggle, and a morbid irritability of the nervous system has not unfrequently been the consequence.

The complaints said to have been produced by the frequent or excessive use of Coffee are head-achs, vertigo, tremors, imbecility, pimples on the face, weakened vision,[g] and according to professor Murray, apoplexy. It has been said that it produces or aggravates hysterical and hypochondriacal affections; and therefore Tissot[h] cautions literary and sedentary people against its use. It is also accused of favouring an hemorrhagic disposition, especially in feverish, choleric, plethoric, and emaciated constitutions.

How far these disorders were really caused by the use of Coffee, appears to admit of much doubt; and therefore until its ill effects are experienced, this catalogue of disorders ought not to alarm those who perceive no ill effects from its use. As an article of diet it is very generally drunk, and found, with very few exceptions, not only to be innocent but salubrious: to a stomach oppressed with animal food a cup or two of strong Coffee affords considerable relief, consequently it promotes digestion; this effect, and that of its obviating drowsiness, are better ascertained than any other ascribed to this article.

A great variety of substitutes for Coffee has been recommended, which it would be unnecessary here to enumerate. The fact is, that in most farinaceous matter, on being roasted or burnt to that degree to which Coffee too frequently is, the peculiar sapid principle is totally dissipated by the heat, and nothing but the more fixed part common to all remains.

[g] See *Lin. Amoen Acad. vol.* 6. *p.* 176. *F. Hoffman. Med. Syst. T.* 4. *P. i.* 209. *Plaz. Diss. de potus coffé abusu, &c. Zimmerman. Erfahr. P.* 2. *p.* 347. *Willis. Pharm. Ration. p.* 203.

[h] *Santé des gens de lettres. p.* 200.

Two species of Lonicera, viz. Periclymenum and Diervilla, or the common, and the yellow-flowered upright Honey-suckle, and the Linnæa borealis, or Two-flowered Linnæa, belonging to the other Cymosæ, have been ranked as medicinal plants; but they are not noticed in the British Dispensatories, nor do they seem interesting enough to deserve particular attention.

Cucumis Colocynthis?

ORD. XI. CUCURBITACEÆ.

From *Cucurbita*, a Gourd.—Gourd-like Plants.

CUCUMIS COLOCYNTHIS. BITTER CUCUMBER, Or, COLOQUINTIDA.

SYNONYMA. Colocynthis. *Pharm. Lond. & Edinb. Gerard Emac.* p. 915. *Cam. Epit.* p. 982. *Raii Hist.* p. 642. Colocynthis fructu rotundo minor. *Bauh. Pin.* p. 313. Colocynthis vulgaris. *Park. Theat.* p. 160.

Class Monoecia. *Ord.* Syngenesia. *Lin. Gen. Plant.* 1092.

Ess. Gen. Ch. *Masc. Cal.* 5-dentatus. *Cor.* 5-partita. *Filamenta* 3.
Fem. Cal. 5-dentatus. *Cor.* 5-partita. *Pist.* 3-fidum.
Pomi semina arguta.

Sp. Ch. C. foliis multifidis, pomis globosis glabris.

THE root is annual, white, divided into long branches, which strike deeply into the ground: the stems trail, like those of the garden cucumber, a considerable length, and are beset with rough hairs: the leaves are of a triangular shape, obtuse, variously sinuated, hairy, on the upper surface of a fine green, beneath rough, and whitish: the flowers are yellow, solitary, and appear at the axillæ of the leaves: the calyx of the male flowers is bell-shaped, and

divided at the brim into five tapering segments: the corolla is monopetalous, bell-shaped, and divided at the limb into five pointed segments: the filaments are three, two of which are bifid at the apex; they are all very short, and inserted into the calyx: the antheræ are linear, long, erect, and adhere together on the outer side: the calyx and corolla of the female flower are similar to those of the male: the three filaments are without antheræ: the germen is large: the style cylindrical, very short, furnished with three stigmata, which are thick, gibbous, bifid, and bent outwardly: the fruit is a round apple, of the size of an orange, divided into three cells, abounding with a pulpy matter, separated every where by cellular membrane, and including many ovate compressed seeds. The flowers appear from May till August.

Colocynth is imported for use to this part of Europe from Turkey, but it is yet unknown here of what place this plant is a native. It seems to have been cultivated in Britain in the time of Turner, and the figure we have given was drawn from a specimen of the plant produced by sowing the seed in a hot bed. Though the plants thus raised put forth flowers readily, they are very rarely known to bear fruit. The spongy membranous medullary part of the fruit is directed for medicinal use: this, "which to the taste is nauseous, acrid, and intensely bitter, on being boiled in water, renders a large quantity of the liquor ropy and slimy: even a tincture of it made in proof spirit is so glutinous as not to pass through a filter, and not easily through a common strainer. The watery decoctions inspissated, yield a large proportion, half of the weight of the colocynth, or more, of a mucilaginous extract; which purges strongly, but with much less irritation, and greater safety, than the colocynth itself, and appears to be the best preparation obtainable from this drastic drug."[a]

This very powerful and irritating cathartic is the Κολοκυνθις of the Ancient Greeks, and the Alhandal of the Arabians. It was frequently employed by both in different diseases, though not without

[a] *Lewis, M. M. p.* 246.

an apprehension of danger, from the violence of its effects, of which various instances are related.[b] In doses of ten or twelve grains this substance purges with great vehemence, frequently producing violent gripes, bloody discharges, and even disordering the whole system. Many attempts therefore have been made to correct its virulence, by the addition of acids, astringents, and the like; but these seem to answer no other purpose than what might be equally effected by a reduction of the dose. "The best method of abating its virulence, without diminishing its purgative virtue, seems to be by triturating it with gummy farinaceous substances, or the oily seeds, which, without making any alteration in the colocynth itself, prevents its resinous particles from cohering, and sticking upon the membranes of the intestines, so as to irritate, inflame, or corrode them."[c]

This drastic purgative has been recommended in various chronic complaints;[d] but as several other cathartics have all the advantages of coloquintida, and may be used with more safety, its use is now seldom resorted to, especially alone. Extractum colocinthidis compositum & pipulæ ex colocynthide cum aloe, are directed by the Pharmacopœias.

[b] See *Shulz Diss. de Colocynthide. Tulp. Obs. lib.* 4. *c.* 26. *p.* 218. A case in which it proved fatal is mentioned by *Plater*, *Obs. p.* 858. And *Dioscorides* observes, that, employed in the way of enema, it occasioned a bloody discharge. *Lib.* 4. *c.* 178.

[c] *Edinburgh New Dispens. by Dr. Duncan. p.* 175.

[d] As worms, lues venerea, cephalalgia, mania, dropsy, Gonorrhæa, epilepsy, asthma, &c.

MOMORDICA ELATERIUM. WILD, Or SQUIRTING CUCUMBER.

SYNONYMA. Cucumis agrestis. *Pharm Lond.* Cucumis asininus. *Gerard Emac. p.* 912. Cucumis sylvestris asininus dictus. *Bauh. Pin.* 314. Cucumis sylvestris sive asininus. *J. Bauh. i. p.* 248. *Raii Hist. p.* 647. Cucumis agrestis sive asininus. *Park. Theat.* 161. Σικυς ἀγρίος *Græcorum.* Succus fructus inspissatus, Elaterium dictus.

Class Monoecia. *Ord.* Syngenesia. *Lin. Gen. Plant.* 1090.

Ess. Gen. Ch. *Masc. Cal.* 5-fidus. *Cor.* 5-partita. *Filamenta* 3.
Fem. Cal. 5-fidus. *Cor.* 5-partita. *Stylus* 3-fidus.
Pomum elastice dissiliens.

Sp. Ch. M. pomis hispidis, cirrhis nullis.

THE root is annual, long, thick, and of a fleshy substance; it sends forth several stems, which are round, branched, thick, rough, and trailing like the common cucumber, but without tendrils; the leaves are irregularly heart-shaped, slightly sinuated, veined, above of a deep green colour, underneath paler, rough, reticulated, and stand upon strong footstalks: the flowers proceed from the base of the footstalks of the leaves, and are both male and female on the same plant: the corolla is divided into five acute segments, reticulated with green veins, and placed above the germen: the calyx consists of five narrow acute segments: the stamina, in the male flowers, are three, short, tapering, two of which have cloven antheræ, the other has a simple one; in the female flowers the filaments are very short, and without antheræ: the style is short, trifid, and terminated by oblong stigmata, of a green colour: the fruit is large, oblong, hairy, divided into three cells, which contain many flat seeds: when ripe this fruit, on being touched, bursts open with great force, and

Momordica Charantia

throws its contents to a considerable distance; hence the name Squirting Cucumber. It is a native of the South of Europe, and flowers in June and July.

Since the time of Gerard, the wild cucumber has been regularly cultivated in this country for medical use: all the parts of the plant are bitter, and strongly purgative,* but the dried juice, or fæculæ of the fruit, known in the shops by the name of Elaterium, is the only part now medicinally employed, and has been distinguished into white and black Elaterium: the first is prepared from the juice, which issues spontaneously, and the latter from that which is obtained by expression.[a] The method directed in the London Pharm. for preparing this medicine, is as follows:—"Slit ripe wild cucumbers, and pass the juice (very lightly pressed) through a very fine sieve into a glass vessel; then set it by for some hours, until the thicker part has subsided. Pour off the thinner part swimming at the top, and separate the rest by filtering; cover the thicker part which remains after filtration, with a linen cloth, and dry it with a gentle heat."

The sensible qualities of this inspissated juice are not remarkable either to the smell or to the taste; it is inflammable, and dissolves readily in watery or spirituous menstrua. Elaterium is a very powerful cathartic, and was frequently employed as such both by the Greek and Arabian physicians, and its use has since been much commended in hydropic cases, particularly by Pauli,[b] Sydenham,[c]

* Radicum vis cathartica major est quam foliorum, minor vero quam fructuum. *Geoff.*

[a] This drug was formerly prepared in several different ways, a circumstance necessary to be attended to in the history of its medicinal effects.

[b] Although S. Pauli employed this medicine with great success, yet from the extreme violence of its operation, he thinks it should not be used until the milder purgatives have failed.

[c] "Elaterium sive fæcula Cucumeris agrestis, potenter, in permodica quantitate vires suas exserit, in conturbanda alvo, & fæcibus, cum serosis & aquosis humoribus copiose egerendis," &c. Op. p. 488.

and Lister.[d] It is undoubtedly the most violent purgative in the Materia Medica, and ought therefore to be administered with great caution, and only where the milder cathartics have proved ineffectual. The dose is from half a grain to three grains: the most prudent and effectual way in which dropsies are now treated by this remedy, is by repeating it at short intervals in small doses.

[d] We may also notice, that Lister observes that the patients, by taking this medicine, became very hot, and found unusual stroug pulsations at the extremities of their fingers. De Hydrope, in App. Op. Mortoni, p. 25.

BRYONIA ALBA. WHITE BRYONY.

SYNONYMA. Bryonia. *Pharm Edinb.* Bryonia aspera sive alba, baccis rubris. *Bauh. Pin. p.* 297. Bryonia alba vulgaris. *Park. Theat. p.* 178. Bryonia alba. *Gerard. Emac. p.* 869. *Raii. Hist. p.* 659. *Synop. p.* 261. *Hall. Hist. Stirp. Helv.* 574. *Hudson. Flor. Ang. p.* 437. *Relhan. Flor. Cantab. p.* 375. *Lightfoot. Flor. Scot.* Bryonia *dioica*. *Withering. Bot. Arr. p.* 1133. *Ic. Flor. Dan. t.* 813. *Jacq. Flor. Aust. t.* 199. *Miller. t.* 70.

Class Dioecia. *Ord.* Syngenesia. *Lin. Gen. Plant.* 1093.

Ess. Gen. Ch. *Masc. Cal.* 5-dentatus. *Cor.* 5-partita. *Filamenta* 3.
Fem. Cal. 5-dentatus. *Cor.* 5-partita. *Stylus* 3-fidus.
Bacca subglobosa, polysperma.

Sp. Ch. B. foliis palmatis utrinque calloso-scabris.

THE root is perennial, large, often a foot in circumference, tapering, branched, and of a whitish yellow colour: the stems are several yards in length, angular, slender, scandent, twisting themselves about the bushes for support: the leaves are large, hairy,

Bryonia alba

Published by Phillips & Fardon, March 1st 1807

lobed, or palmated, lobes pointed; they stand alternately upon strong hairy footstalks: the flowers are of a yellowish green colour, produced in clusters at the footstalks of the leaves, and are male and female on different plants: the calyx of the male flowers is bell-shaped, and deeply divided into five narrow pointed segments: the corolla is also divided into five segments, which are ovate, and spreading: the filaments are three, short, thick, and furnished with irregular antheræ, of which two are said to be on each two of the filaments, and one on the third: the calyx and corolla of the female flower resemble those of the male, but are smaller: the germen is round, and placed below the flower: the style is strong, erect, of the length of the corolla, and divided at the top into three parts, which are bent downwards, and each furnished with a large triangular stigma: the fruit is a smooth red berry containing five or six seeds. It is common in woods and hedges, and flowers in May and June.

Linnæus places this plant in the class Monoecia, though he tells us that Jacquin describes it as dioecious, and we have always seen it so in this country; nor have we ever found it to bear black berries. Some doubt may also arise whether it be properly referred to the order Syngenesia, as the antheræ upon the different filaments do not unite; a circumstance which we have endeavoured to represent in a separate display of the flower.

"Fresh Bryony root, taken up in the beginning of spring, abounds with a thin milky juice: if the upper part of the root be bared of earth, and the top cut over transversely, the juice continues to rise gradually to the surface, in notable quantity, for two or three days successively, and may be collected by forming a cavity in the middle to receive it. Both the root in substance, and the juice, have a disagreeable smell, and a nauseous bitter biting taste: applied for some time to the skin, they inflame or even vesicate the part. On drying the one, or inspissating the other, they lose most of their acrimony, and nearly the whole of their ill scent. In summer the root proves much less juicy and weaker both in smell and taste."[a]

[a] *Lewis, M. M. p.* 165.

Bergius [b] states the virtues of this root to be purgans, hydragoga, emmenagoga, diuretica; *recent. rad.* subemetica; and recommends it in dropsy and asthma.

This powerful and irritating cathartic, though now seldom prescribed by physicians, is said to be of great efficacy in evacuating serous humours, and has been chiefly employed in hydropical disorders.[c] Instances of its good effects in other chronic diseases are also mentioned, as asthma, mania,[d] and epilepsy.[e] In small doses it is reported to operate as a diuretic, and to be resolvent and deobstruent: given in powder, from a scruple to a dram, it proves strongly purgative; and the juice, which issues spontaneously in doses of a spoonful or more, has similar effects, but is more gentle in its operation. An extract, prepared by water, acts more mildly, and with greater safety, than the root in substance, and may be given from half a dram to a dram. Externally the fresh root has been employed in cataplasms, as a resolvent and discutient; also in ischiadic and other rheumatic affections.

[b] *Mat. Med. p.* 786.

[c] See *Burcgraf, Lexicon Med. p.* 1710. where he gives a particular account of a successful method of employing this root.

[d] *Sydenham, Process. integr. in op. p.* 626.

[e] *Arnoldus De Villa Nova. Brev. pract. L.* 1. *c.* 22. *Reussner, Curat. & Observ. p.* 158.

END OF THE FIRST VOL.

London: Printed by Phillips & Fardon,
George Yard, Lombard Street